

Project Specifications

Elizabeth River Trail Phase IIIA

Norfolk, Virginia

Prepared for

City of Norfolk Department of Public Works

City Hall Building, Room 700
810 Union Street
Norfolk, Virginia 23510



**VDOT Project: EN00-122-138, C506
(UPC 97727)
FHWA 534 DATA# (4J028)
Construction Type Code: (Y052)
FHWA AID # PE Phase: TEA-5122 (148)
(UPC 56430)
FHWA AID # CN Phase: TEA-5A03 (508)**

December 2, 2013

Prepared by



277 Bendix Road, Suite #500
Virginia Beach, Virginia 23452
757-499-4224

PROJECT MANUAL
for
ELIZABETH RIVER TRAIL – PHASE 3A
NORFOLK, VIRGINIA

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City of Norfolk

Posted: June 6, 2014

INVITATION FOR BIDS CITY OF NORFOLK - DEPARTMENT OF PUBLIC WORKS

PROJECT: **ELIZABETH RIVER TRAIL – PHASE 3A**
VDOT PROJECT: **EN00-122-138, C506 (UPC 97727)**

Owner: City of Norfolk
Department of Public Works
Room 700, 7th floor, City Hall Building
810 Union Street, Norfolk, VA 23510

AE: URS Corporation
277 Bendix Road, Suite 500
Virginia Beach, VA 23452

Contact: Jessica Blackburn, P.E.

Contact: Craig Pearson, P.E.

Tel: (757) 664-7335 / Fax: (757) 664-7311

Tel: (757) 499-4224

Sealed bids are to be received in Public Works Department, Attn: Contracts Office, Room 700, 7th floor, City Hall Building, 810 Union Street, Norfolk, VA 23510 until **2:00 p.m., Tuesday, July 8, 2014**, for the above titled Project.

The Work under this project consists of the construction of a multipurpose trail at the intersection of Redgate Ave. and Weyanoke Ave. to Armistead Bridge Road at Jeff Robertson Park. Work will include trail and pedestrian bridge construction and related improvements. **Funding for the project includes both Federal and State funds therefore the Davis-Bacon Act and VDOT conformance will apply. All prospective contractors, joint-ventures, and subcontractors shall be pre-qualified with the Virginia Department of Transportation prior to award. Information regarding VDOT prequalification can be found at www.virginiadot.org/business/const/prequal.asp . The DBE goal for this project is set at 4%.**

Bidding Documents are available from the Department of Public Works in accordance with the Instructions to Bidders upon non-refundable payment of **\$5.00 per CD set** in the form of a check made payable to Treasurer, City of Norfolk. Cash payments will not be accepted. A copy of the Bidding Documents will be on file and open to inspection at The Builders and Contractors Exchange, Inc., Norfolk, VA (757-858-0680), The Builders and Contractors Exchange, Inc., Richmond, VA (804-353-2788), McGraw-Hill Construction-Dodge, Richmond, VA (804-343-2034), Reed Construction Data, Norcross, GA (800-641-4653), Valley Construction News, Richmond, VA (804-674-0118), and Hispanic Contractors Association-Carolinas, Columbia, SC (877-227-1680 ext. 8054).

A Bid Bond, certified check, or cashier's check made payable to the Treasurer, City of Norfolk, for 5% of total bid must accompany each bid.

State Contractor registration class and number is required on the outside of the envelope. The City reserves the right to cancel the bid opening or to reject any or all bids in whole or part, when it is in the best interest of the City.

The right to waive informalities and to determine responsiveness of any bid and responsibility of all bidders is reserved to the City. Withdrawal of bids will be in accordance with Section 33.1-42.1 of the Norfolk City Code and Section 11-54 of The Code of Virginia, 1950 (as amended).

John M. Keifer
Director

Virginian Pilot – June 8, 2014
DemandStar – June 8, 2014

INSTRUCTIONS TO BIDDERS

1. AUTHORIZATION TO TRANSACT BUSINESS IN THE COMMONWEALTH

- (a) Bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 to include in its bid or proposal the identification number issued to it by the State Corporation Commission.
- (b) Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law shall include in its bid or proposal a statement describing why⁶ the bidder or offeror is not required to be so authorized.

2. SUBMISSION OF BIDS

- (a) Make all bids on "Bid Form" and seal in opaque envelope. The name of project, the contractor's name, address, and Virginia Contractor Registration Class and Number shall be placed on the outside of the envelope.
- (b) If a contract is for \$120,000.00 or more, or if the total value of all such construction, removal, repair, or improvements undertaken by the bidder within any 12 month period is for \$750,000.00 or more, the bidder is required under Title 54, Chapter 11, Code of Virginia, 1950 (as amended), to show evidence of being licensed as a Class A Contractor. If a contract is \$7,500.00 or more, but less than \$120,000.00, or if the total value of all such construction, removal, repair or improvements undertaken by the bidder within any 12 month period is less than \$150,000, the bidder is required to show evidence of being licensed as a Class B Contractor. If a contract is \$1,000 or more, but less than \$7,500, or if the total value of all such construction, removal, repair or improvements undertaken by the bidder within any 12 month period is less than \$150,000, the bidder is required to show evidence of being licensed as a Class C Contractor. The bidder shall place on the bid above its signature its Virginia Contractor Registration Class and Number. If a contract is less than \$1,000.00, licensure is not required under Title 54, Chapter 11, Code of Virginia, 1950 (as amended).
- (c) If bids are submitted by mail, enclose the above noted envelope in a second sealed, opaque envelope and address to: **City of Norfolk, Department of Public Works, Attn: Contracts Office, Room 700, 7th floor, City Hall Building, 810 Union St., Norfolk, VA 23510.** Bids submitted by mail must be received at the above address before the time designated for bid opening.
- (d) Fully fill in all blanks in ink or typewritten, and state numbers in both writing and figures. Signatures shall be in longhand with name and title printed below. Bidders shall acknowledge all addenda in spaces provided on the bid form. For unit price contracts, in the event of a discrepancy between the Total Base Bid and the total of the extension of unit prices, the total extension of unit prices governs in determining the bid amount.
- (e) Interlineations, alterations, and irregularities of any kind may be cause for rejection of the bid. Erasures or any physical changes on the form shall be initialed by the Bidder.
- (f) Bidders may withdraw a bid after it has been submitted to the City any time prior to the stipulated time for opening such bids. Withdrawal of bids will be in accordance with Section 33.1-42.1 of the Norfolk City Code and Section 2.2-4330 of the Code of Virginia, 1950 (as amended).

3. EXAMINATION OF SITE

The bidder shall be responsible for having ascertained all pertinent local and existing conditions determinable by inspection and inquiry both on the site and adjacent thereto, including any other work being performed thereon, and shall include in its bid all cost attendant upon problems arising from said conditions existing at the time of submission of its bid.

Reference is made to the Contract Documents for information relating to reports, explorations, underground facilities, and easements. On request, the owner will provide each Bidder access to the site to conduct such examinations, investigations, explorations, tests and studies as each Bidder deems necessary for submission of a Bid. The Bidder must fill all holes, clean up, and restore the site to its former condition upon completion of such explorations, investigations, tests and studies, and hold the Owner harmless from any damage to property or injury to persons resulting from or arising out of such explorations, investigations, tests, and studies.

4. INQUIRIES, INTERPRETATION AND ADDENDA

Should a bidder find discrepancies in, or omissions from, the drawings or documents, or should it be in doubt as to their meaning, it should at once notify the Owner in writing. The Owner will welcome such inquiries and they will be given consideration. Every interpretation made by the Owner will be in the form of a printed addendum which will be on file in the office of the Owner. Addenda will be sent to each bidder, but it will be the bidder's responsibility to know of, examine and become familiar with all addenda issued. All addenda shall become a part of the Contract Documents. The Owner will not be responsible for any oral instruction.

The submission of a Bid will constitute inconvertible representation by the Bidder that the Bidder has complied with every requirement of this Section, that without exception, the Bid is premised upon the agreement by the Bidder to perform the Work required by the Contract Documents, and applying specific means, methods, techniques, sequence or procedures of construction (if any) that may be shown or indicated or expressly required by the Contract Documents, that the Bidder has given Written Notice to the Owner of all conflicts, errors, ambiguities, and discrepancies that the Bidder has discovered in the Contract Documents and the written resolutions thereof by the Owner is acceptable to the Bidder, and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions of performance and furnishing the Work.

5. BID GUARANTEE

Bids shall be accompanied by a bid guarantee of five percent (5%) of the amount of the total bid including all additive alternates, if any, and may be a certified check or cashier's check or a Bid Bond, made payable to: **Treasurer, City of Norfolk**. Such bid bond or check shall be submitted with the understanding that it shall guarantee that the bidder will not withdraw its bid during the period of sixty (60) days following the opening of bids; that if its bid is accepted, it will enter into a Contract with the Owner in accordance with a form of agreement acceptable to and approved by the Owner and that the required Performance and Payment Bonds will be given; and that in the event of the withdrawal of said bid within said period, or failure to enter into said contract and given said bonds within ten (10) days after it has received notice of acceptance of its bid, the bidder shall be liable to the Owner for the full amount of the bid guarantee as representing the damage to the Owner on account of the default of the bidder in any particular thereof. The bid bonds and checks will be returned to the bidders after the Owner and the lowest, responsive, responsible bidder have executed a contract. If the required contract has not been executed within sixty (60) days after the date of the opening of the bids, then the bond or check of any bidder will be returned upon its request, provided it has not been notified of the acceptance of its bid prior to the date of such request.

6. PERFORMANCE AND PAYMENT BOND

The Contractor shall furnish a performance bond and a labor and material payment bond each in the amount of 100% of the contract price. Said bonds shall be delivered to the Owner (in duplicate) and shall be approved by the Owner prior to the execution of a construction contract between the Contractor and the Owner. Bonds shall be City of Norfolk standard form and shall be in accordance with Section 33.1-76 of the Norfolk City Code. All costs of bonds shall be paid by the Contractor. A bond rider will be required should change orders increase the amount of the contract by \$100,000 or more.

7. TIME OF COMPLETION

(a) Time is of the essence. All work shall be completed within **One Hundred Twenty (120)** calendar days from the Notice to Proceed. Work shall commence within (10) ten days from date of Notice to Proceed.

(b) Work shall not commence until the Contractor has received a fully executed copy of the Contract which authorizes the Work and has also received a Notice to Proceed issued by the authorized City representative. Work commenced prior to receipt of both a fully executed copy of the Contract and a written Notice to Proceed from an authorized City official shall be deemed unauthorized and such work will progress solely at Contractor's risk.

8. NON-DISCRIMINATION CLAUSE

The Contractor agrees to comply, and to require all suppliers and subcontractors paid in whole or in part from funds made available under this contract to comply with Section 122(a)(1) of the State and Local Fiscal Assistance Act of 1972 (P. L. 92-512), as amended, to wit:

"No person in the United States shall, on the grounds of race, color, national origin, or sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity of a State government or unit of local government, which government or unit receives funds made available under Subtitle A (of Title I of the Act.)

Any prohibition against discrimination on the basis of age under the Age Discrimination Act of 1975 or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973 shall also apply to any such program or activity.

Any prohibition against discrimination on the basis of religion, or any exemption from such prohibition, as provided in the Civil Rights Act of 1964 or Title VIII of the Act of April 11, 1968, hereafter referred to as the Civil Rights Act of 1968, shall also apply to any such program or activity."

Further, the Contractor agrees to comply with Section 33.1-53 of the Code of the City of Norfolk, Virginia 1979, as amended, regarding prohibited employment discrimination.

9. MINORITY BUSINESS CLAUSE

It is the policy of the City of Norfolk to facilitate the establishment, preservation, and strengthening of small businesses and businesses owned by women and minorities and to encourage their participation in the City's procurement activities. Toward that end, the City encourages these firms to compete and encourages non-minority firms to provide for the participation of small businesses and businesses owned by women and minorities through partnerships, joint ventures, subcontracts, and other contractual opportunities. Bidders (offerors) are asked, as part of their submission, to describe any planned use of such businesses in fulfilling this contract.

10. NON-COLLUSION AFFIDAVIT

(a) Every bidder, by submitting a bid, shall be deemed to covenant, with regard to said bid, as follows:

(1) that said bid was arrived at independently without collusion, consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor.

(2) that, unless otherwise required by law, the prices which have been quoted in the bid submitted have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor.

(3) that no attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

A bid shall not be considered for award nor shall any award be made where the bidder shall have failed to comply with a(1), a(2), or a(3) above.

(b) Every bidder, in addition to making the above covenants (a)(1), (a)(2) and (a)(3) will be required to provide the City of Norfolk, with the bid submitted, the affidavit contained herein.

(c) Every bidder will be required to disclose, with the submitted bid, the following information:

(1) the correct mailing address of the bidder.

(2) if a corporation, the name and current mailing address of the President, the Secretary and the Treasurer of the corporation.

(3) if a partnership, proprietorship or other firm, the name and current mailing address of each partner, proprietor or member of said firm.

(4) whether or not the bidder is associated with; owns, in whole or in part; or is owned, in whole or in part, or is a subsidiary of, any other bidder.

(d) The fact that a bidder (1) has published price lists, rates or tariffs covering items included in the submitted bid; (2) has informed prospective customers of proposed or pending publication of new or revised price lists for such items; or (3) has sold the same items to other customers at the same prices being bid, does not constitute a disclosure within the meaning of Subparagraph 9(a).

(e) Any bid submitted by a corporate bidder shall be deemed to have been authorized by the Board of Directors of the bidder and such authorization shall be deemed to include the signing and submission of the bid and the execution of the affidavit required in (b) above as the acts and deeds of the corporation.

11. SUBSTANCE ABUSE AND DRUG-FREE WORK PLACE

The Contractor agrees to comply with Section 33.1-58 of the Code of the City of Norfolk, Virginia, 1996, as amended, regarding substance Abuse and Drug-Free Work Place Policy.

Bids to be opened: **2:00 p.m., Tuesday
July 8, 2014**

Work to be Completed in: **120 calendar days**

Liquidated Damages: **\$600.00 per day to Substantial Completion
\$300 per day to Final Completion**

Performance Bond: **100%**

Payment Bond: **100%**

Bid Bond: **5%**

BID FORM

To: City of Norfolk
Department of Public Works
City Hall Building
810 Union Street, Room 700
Norfolk, Virginia 23510

A. UNIT PRICE BID

In compliance with the Invitation for Bids and Instructions to Bidders, the General Conditions of the Contract, the contract drawings and specifications titled **ELIZABETH RIVER TRAIL – PHASE 3A; VDOT PROJECT: EN00-122-138, C506 (UPC 97727)** and all addenda issued to date, all of which are part of this bid, the undersigned hereby proposes to furnish all items, including materials, labor, and equipment called for by, and in strict accordance with Contract Documents and the list of unit prices hereto attached and referred to as Attachment A, for the sum of:

\$_____ Dollars and
(use words)
_____ Cents (\$_____)

B. ADDENDA

The undersigned acknowledges receipt of the following addenda:

Addendum No. _____ Dated: _____

Addendum No. _____ Dated: _____

We agree to enter into a contract with the City of Norfolk, Virginia within ten (10) days of the award of same to us for the price named in our bid.

It is expressly agreed by us that the City of Norfolk, Virginia shall have the right to reject any and all bids and to waive any informalities.

In default of the performance on our part of the conditions of bid, our failure to enter into a contract with the City of Norfolk, Virginia, within the time above set, we herewith furnish a certified check, cashier's check (or Bid Bond) in the amount of \$_____, which shall be forfeited as liquidated damages to the City of Norfolk, Virginia, but otherwise the said check or

Bid Bond shall be returned.

We agree to begin work at any time after receipt of the Notice to Proceed from the Director of Public Works and complete all of the Work within **One Hundred Twenty (120) calendar days**.

C. Norfolk Businesses: It is the policy of the City to support Norfolk businesses and workforce development and it encourages companies with corporate offices in Norfolk and which employ Norfolk residents to compete for City contracts. Bidders are asked, as part of their submission, to advise of their Norfolk location and detail their employment of Norfolk residents.

D. Equal Opportunity Business Development: It is the policy of the City of Norfolk to facilitate the establishment, preservation, and strengthening of small businesses and businesses owned by women and minorities and to encourage their participation in the City's procurement activities. Toward that end, the City encourages these firms to compete and encourages non-minority firms to provide for the participation of small businesses and businesses owned by women and minorities through partnerships, joint ventures, subcontracts, and other contractual opportunities. Bidders (offerors) are asked, as part of their submission, to describe any planned use of such businesses.

1. Is your firm a minority owned business? Yes ___ No ___ If yes, please check the appropriate category: ___ African American (male), ___ African American (female), ___ Caucasian (female), ___ Hispanic (male), ___ Hispanic (female), ___ Asian American (male), ___ Asian American (female), ___ American Indian (male), ___ American Indian (female), ___ Eskimo (male), ___ Eskimo (female), ___ Aleut (male), ___ Aleut (female), ___ Other (male), ___ Other (female).

2. Subcontracting Opportunities for Small, Women Owned, Minority Business Enterprises and Disabled Veterans. All prime contractors are requested to furnish the following information regarding participation of small, women owned, minority business enterprises and disabled veterans:

a. Proposed Name of your Subcontractor(s):

b. Proposed Minority Category of Subcontractor(s) - please check the appropriate category(ies):

<input type="checkbox"/> African American (male)	<input type="checkbox"/> African American (female)
<input type="checkbox"/> Hispanic (male)	<input type="checkbox"/> Hispanic (female)
<input type="checkbox"/> Asian American (male)	<input type="checkbox"/> Asian American (female)
<input type="checkbox"/> American Indian (male)	<input type="checkbox"/> American Indian (female)
<input type="checkbox"/> Eskimo (male)	<input type="checkbox"/> Eskimo (female)
<input type="checkbox"/> Aleut (male)	<input type="checkbox"/> Aleut (female)
<input type="checkbox"/> Other (male)	<input type="checkbox"/> Caucasian (female)
	<input type="checkbox"/> Other (female)

c. Proposed Amount of Subcontracts:

d. Proposed Description of commodity (i.e. masonry, hauling, insulation, etc.):

e. Proposed Description of Project:

f. Proposed Total value of awards to all subcontractors:

g. Proposed Total Number of minority subcontracts awarded:

h. If you do not propose the use of any subcontractors, please check here ____.

E. The undersigned has read all sections under "Instructions to Bidders."

F. **CONTRACTOR'S REGISTRATION AND SIGNATURE**

Registered Virginia Contractor Class and No. _____

City of Norfolk Business License No. _____

Contractor _____ Signed _____ (SEAL)

Date _____ Title _____

NOTE: If Bidder is a corporation, write state of incorporation under signature and if a partnership, give full names of all partners.

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AFFIDAVIT

City of Norfolk, Virginia project: **ELIZABETH RIVER TRAIL – PHASE 3A**

Bid Date:_____

STATE OF VIRGINIA

(City/County)

This day personally appeared before the undersigned, a Notary Public in and for the City/County and State aforesaid,

_____, who having been first duly sworn according to law, did depose and aver as follows:

(a) That he is _____
(owner, partner, president, etc.)

of _____
(insert name of bidder)

(b) That he is personally familiar with the bid of

_____ submitted in connection with the above captioned City of Norfolk project.

(c) That said bid was formulated and submitted in good faith as the true bid of said bidder.

(d) That said bid in no manner violates the Sherman Antitrust Act (15 U.S.C. '1 *et seq.*), The Virginia Antitrust Act (§59.1-9.1 through §59.1-9.17 Code of Virginia, (1950), as amended) or the Conspiracy to Rig Bids to Government Act (§§59.1-68.8, Code of Virginia (1950), as amended.

And further this deponent saith not.

Affiant

Subscribed and sworn to before me this _____ day of _____, 20__.

My commission expires: _____, 20__

Notary Public

MAILING ADDRESS, FAX AND TELEPHONE NUMBER OF BIDDER:

IF CORPORATION, PROVIDE NAME AND MAILING ADDRESS AS REQUIRED BELOW

PRESIDENT

SECRETARY

TREASURER

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IF PARTNERSHIP, PROPRIETORSHIP, OR OTHER FIRM, PROVIDE NAME AND MAILING ADDRESS OF EACH PARTNER, PROPRIETOR, OR MEMBER OF FIRM.

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A. COMPLIANCE WITH STATE LAW

B. AUTHORIZATION TO TRANSACT BUSINESS IN THE COMMONWEALTH

I. CERTIFICATION

- A. The Bidder/Vendor (Please fill in with your enterprise's complete name)

certifies that it is organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50.

The identification number issued to Bidder/Vender by the State Corporation Commission:

- B. Bidder/Vendor that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law shall describe why it is not required to be so authorized:

II. INSTRUCTIONS

a. The Bidder/Vendor shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Vendor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

b. A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Bidder's/Vendor's responsibility. Failure of the Bidder/Vendor to furnish a certification or provide such additional information as requested by the

appropriate City purchasing official may render the Bidder/Vendor non-responsible.

c. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of a Bidder/Vendor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

d. The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Bidder/Vendor knowingly rendered an erroneous certification, in addition to other remedies available to the City, the appropriate City purchasing official may terminate the contract resulting from this solicitation for default.

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SCHEDULE OF UNIT PRICES

ELIZABETH RIVER TRAIL – PHASE 3A

OWNER: CITY of NORFOLK, VIRGINIA

The unit prices have been computed in accordance with Subparagraph 7.3.3.2 of the General Conditions. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents. The prices quoted shall include, without exception, all materials, labor, equipment, appliances, clean-up, applicable sales, use and other taxes, building permits or fees, and the Contractor's labor, overhead, profit, mobilization and other mark-ups, and in full accordance with the Specifications. Include allowance for waste where appropriate. The unit prices shall be maintained throughout the contract period. Unit prices shall be used in determining additions or deductions from the TOTAL CONTRACT AWARD amount in the event of changes in the work.

Item #	Description	Unit	Qty	Price	Extension
1	Mobilization	LS	1		
2	Erosion & Sediment Control	LS	1		
3	Tree Removal	LS	1		
4	Cut & Haul (10' Wide Trail)	CY	580		
5	VDOT #9 Stone (10' Wide Trail)	TON	256		
6	6" 21A Base Stone (10' Wide Trail)	TON	832		
7	1.5" VDOT SM-9.5 Asphalt (10' Wide Trail)	TON	72		
8	Geotextile Fabric (10' Wide Trail)	SY	3,974		
9	Pavement Markings	LS	1		
10	Steel Bollards	EA	3		
11	Wood Bollards	EA	26		
12	Signage	LS	1		
13	Detectable Warning Area (Truncated Domes)	SF	120		
14	Fencing and Gates	LF	3,197		
15	Fence Removal	LF	1,756		
16	Bridge	LS	1		
17	Bridge Test Piles	VLF	150		
18	Bridge Production Piles	VLF	2,715		
19	Pavement Demolition and Removal	SY	500		
20	2" VDOT SM-12.5 Asphalt (Street Area)	TON	35		
21	6" 21A Base Stone (Street Area)	TON	120		

Item #	Description	Unit	Qty	Price	Extension
22	Sign Pole Bracing / Relocating Guy Wires	LS	1		
23	3" Caliper Oak Tree on Mallory Property	EA	2		
	TOTAL BID				\$

THE CITY OF NORFOLK, VIRGINIA

OFFICE OF THE CITY MANAGER

CONTRACT

THIS AGREEMENT, made as of the ____ day of _____ in the year **2014**, is between the **City of Norfolk, Virginia**, acting by and through the City Manager, hereinafter styled the **City**, and

party of the second part, hereinafter styled the **Contractor**.

WITNESSETH, That whereas the City has awarded to the Contractor, in accordance with his bid of **July 8, 2014** a contract for **ELIZABETH RIVER TRAIL – PHASE 3A; VDOT PROJECT EN00-122-138, C506 (UPC 97727)** as described in specifications and drawings prepared therefor by **URS Corporation, 277 Bendix Road, Suite 500, Virginia Beach, Virginia 23452** hereinafter styled the Engineer, or by the City of Norfolk, and on file in the office of the Director of Public Works of the City of Norfolk, Virginia.

ARTICLE 1 - THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 2 - DATE OF COMMENCEMENT AND COMPLETION TIMES

The Contractor further agrees to begin Work at such a date as the Director of Public Works Department, Norfolk, Virginia, shall notify it to begin via a Notice to Proceed letter, and that it will achieve Substantial Completion of the entire Work in accordance with Paragraph 9.8 of the General Conditions not later than **One Hundred Twenty (120) consecutive calendar days** from the date of commencement as well as achieve Final Completion in accordance with Paragraph 9.10 of the General Conditions not later than **Thirty (30) consecutive calendar days** from the date of commencement.

ARTICLE 3 - LIQUIDATED DAMAGES

The Contractor and the City recognize that time is of the essence of this Agreement. In view of the difficulty of ascertaining the loss which the City will suffer by reason of delay in the performance of the Work, the Contractor and the City hereby agree upon as the liquidated damages set below that the City will suffer by reason of delay and/or default, and not as a penalty. Further, the City shall deduct and retain the amount of such liquidated damages out of the moneys which may be due or become due to the Contractor under this Agreement.

Accordingly, should the Contractor fail to achieve Substantial Completion of the aforesaid Work in accordance with the contract documents to the satisfaction and approval of the Engineer within the time stipulated in Article 2 above, the Contractor shall pay to the City of Norfolk, Virginia, **Six Hundred**

Dollars and Zero Cents (\$600.00) for every calendar day beyond the time set for substantial completion.

After Substantial Completion, if the Contractor shall neglect, refuse, or fail to complete the remaining Work within the contract time or any proper extension thereof granted by the City, the Contractor shall pay the City **Three Hundred Dollars and Zero Cents (\$300.00)** for every calendar day beyond the time set for final completion until the Work is completed and ready for final payment

ARTICLE 4 - CONTRACT PRICE

The City shall pay the Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined below subject to additions and deductions as provided in the Contract Documents:

For all Unit Price Work, an amount equal to the sum of the established unit prices hereto attached and referred to as Attachment A, for:

_____ **Dollars and** _____ **Cents (\$_____.)**

Estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by the Engineer's recommendation to the City.

ARTICLE 5 - PAYMENTS

Based upon applications for payment submitted to the Engineer by the Contractor and certificates for payment issued by the Engineer, the City shall make monthly progress payments on account of the contract sum to the Contractor as provided in the conditions of the contract as follows:

The City will pay the Contractor, on or about the thirtieth calendar day after receipt of a Request for Payment, one hundred percent (100%) of the portion of the contract sum properly allocable to labor, materials, and equipment incorporated in the Work and eighty percent (80%) of the portion of the contract sum properly allocable to materials and equipment suitably stored at the site or at some other location agreed upon in writing by the parties, less the aggregate of previous payments in each case; provided, however, that the owner, at any time after fifty percent (50%) of the Work has been completed, if it finds that satisfactory progress is being made, may make any of the remaining partial payments in full; and upon final completion, a sum sufficient to increase the total payment to one-hundred percent (100%) of the contract sum. But such full payment or payments shall in no manner be construed as reducing the amount of the bond, or the liability of the surety thereon, until final completion and acceptance of all items of Work herein set forth.

The action of the Engineer by which the Contractor is to be bound according to the terms of this contract shall be that evidenced by his final estimate and certificate, all prior estimates upon which eighty percent (80%) or more may be made, being merely payment on account, and not payments for accepted Work, and subject to the correction of such final estimate, which may be made with notice to the Contractor.

ARTICLE 6 - CONTRACTOR'S REPRESENTATION

To induce the City to enter into this Contract, the Contractor makes the following representations:

- A. Contractor has examined and carefully studied the Contract Documents and other related data identified in the Bidding Documents.
- B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, and performance of the Work.
- C. Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.
- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site which have been provided with the Contract Documents, and (2) reports and drawings of a hazardous environmental condition, if any, at the site, which have been provided with the Contract Documents.
- E. Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and underground facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work.
- F. Contractor is aware of the general nature of Work to be performed by City and others at the Site that relates to the Work as indicated in the Contract Documents.
- G. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor
- H. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- I. Contractor hereby certifies that it has familiarized itself with Sections 33.1-86 through 33.1-93 of the Code of the City of Norfolk, Virginia, 1979, as amended, entitled "Ethics in Public Contracting," including the additional statutes set forth in Section 33.1-86 thereof, and further that all amounts received by the Contractor pursuant to this Contract are proper and in accordance therewith.
- J. Contractor hereby certifies that at all times during which any term of this Agreement is in effect, it does not and shall not knowingly employ any unauthorized alien. For purposes of this section, an "unauthorized alien" shall mean any alien who is neither lawfully admitted for permanent residence in the United States nor authorized to be employed by either Title 8, section 1324a of the United States Code or the U.S. Attorney General.
- K. Contractor hereby represents that it is organized as a stock or non-stock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership and is authorized to transact business in the Commonwealth as a domestic or foreign business entity if

so required by Title 13.1 or Title 50 or as otherwise required by law.

ARTICLE 7 - CONTRACT DOCUMENTS

The Contract Documents consist of the following:

- a. Invitation for Bids
- b. Instructions to Bidders
- c. Bid Form/Affidavit
- d. Bid Bond
- e. Contract
- f. Performance Bond
- g. Payment Bond
- h. Certificate of Insurance
- i. Notice of Award
- j. Notice to Proceed
- k. Change Orders (if any)
- l. Other Documents as may be required by law or appended hereto
- m. Plans and Drawings prepared by: **URS Corporation, 277 Bendix Road, Suite 500, Virginia Beach, Virginia 23452.**
- n. Specifications prepared or issued by: **URS Corporation, 277 Bendix Road, Suite 500, Virginia Beach, Virginia 23452.**
- o. Addendum (as listed in Bid Form)

Witness the following signatures and seals:

Witness:

_____(SEAL)
Contractor

_____(SEAL)
Signature

Printed Name

Seal if
Incorporated

_____(SEAL)
Title

Virginia State Contractor's License No. _____

City of Norfolk Business License No. _____

Contents Approved:

Director of Public Works

Approved as to form and correctness:

Deputy City Attorney

CITY OF NORFOLK, VIRGINIA

By_____
City Manager

Attest: _____
City Clerk

Certification of funds

I hereby certify that the money required for this contract (agreement, obligation or expenditure) is in the City Treasury to the credit of the fund from which it is to be drawn, and not appropriated for any other purpose.

Account: _____

Amount: _____

Contract No.: _____

Vendor Code: _____

Director of Finance

Date

PERFORMANCE BOND

Bond No. _____
Amount: \$ _____

KNOW ALL PERSONS BY THESE PRESENTS, that _____, hereinafter called the Contractor and _____ a corporation duly organized and existing under and by virtue of the laws of the State of _____, hereinafter called the Surety, and authorized to transact business within the Commonwealth of Virginia as the Surety, are held and firmly bound unto the City of Norfolk as Owner, in the sum of _____ **DOLLARS and ____ CENTS** (\$ _____), lawful money of the United States of America, for payment of which, well and truly be made to the Owner, the Contractor and the Surety bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents as follows:

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:

WHEREAS, the Contractor has executed and entered into a certain Agreement, hereto attached, with the Owner dated _____, 2014, for

ELIZABETH RIVER TRAIL – PHASE 3A; VDOT PROJECT: EN00-122-138, C506 (UPC 97727)

NOW THEREFORE, if the Contractor, and its successors and assigns, shall at all times duly, promptly, and faithfully perform the Work and any alteration in or addition to the obligations of the Contractor arising thereunder, including the matter of infringement, if any, of patents or other proprietary rights, and shall assure all guarantees against defective workmanship and materials, including the guarantee period following final completion by the Contractor and final acceptance by the Owner and comply with all the covenants therein contained in the Specifications, Drawings, and other Contract Documents required to be performed by the Contractor, in the manner and within the times provided in the Agreement, and shall fully indemnify and save harmless the Owner from all costs and damage which it may suffer by reason or failure to do so, and shall fully reimburse and repay it all outlay and expenses which it may incur in making good any default, and reasonable counsel fees incurred in the prosecution of or defense of any action arising out of or in connection with any such default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that the Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract Documents or to the Work to be performed thereunder, or payment thereunder before the time required therein, or waiver of any provision thereof, or assignment, subletting or transfer thereof or any part thereof, shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, addition to the terms of the Contract Documents or any such payment, waiver, assignment, subcontract or transfer.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

Whenever Contractor shall be declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Owner shall have the right, at its option, to require the Surety to promptly proceed to remedy the default within 30 days of notice by proceeding or procuring others to proceed with completing the Agreement with its terms and conditions including the correction of any defective work and the provision of safety measures required as the result of such default; and all reserves, deferred payments, and other funds provided by the Agreement to be paid to Contractor shall be paid to Surety at the same times and under the same conditions as by the terms of that Agreement such fund would have been paid to Contractor had the Agreement been performed by Contractor; and Surety shall be entitled to such funds in preference to any assignee of Principal of any adverse claimant. Notwithstanding the above, the Owner shall have the right, with

the approval of the Surety which shall not be unreasonably withheld, to take over and assume completion of the Agreement and be promptly paid in cash by the Surety for the cost of such completion less the balance of the Contract price.

IN WITNESS WHEREOF, all above parties bounded together have executed this instrument this _____ day of _____, 2014, the name and corporate seal of each corporate party being hereto affixed and those presents duly signed by its undersigned representative, pursuant to authority of its governing body.

CONTRACTOR

By: _____ (Seal)

Name: _____

Title: _____

Attest

SURETY

By: _____ (Seal)

Attest

APPROVED AS TO FORM: _____, 2014

City of Norfolk, OWNER

By: _____
Deputy City Attorney

NOTE: Date of Bond shall not be prior to the date of the Agreement. If the Contractor is a partnership, all partners shall execute the Bond.

IMPORTANT: The Surety named on this Bond shall be one who is licensed to conduct business in the Commonwealth of Virginia, and named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies, as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent shall be accompanied by a certified copy of the authority to act for the Surety at the time of signing of this Bond.

End of Page

PAYMENT BOND

Bond No. _____

Amount: \$ _____

KNOW ALL PERSONS BY THESE PRESENTS, that _____, hereinafter called the Contractor and _____ a corporation duly organized and existing under and by virtue of the laws of the State _____, hereinafter called the Surety, and authorized to transact business within the Commonwealth of Virginia as the Surety, are held and firmly bound unto the City of Norfolk as Owner, in the sum of _____ **DOLLARS and _____ CENTS (\$_____)**, lawful money of the United States of America, for payment of which, well and truly be made to the Owner, the Contractor and the Surety bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents as follows:

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:

WHEREAS, the Contractor has executed and entered into a certain Agreement, hereto attached, with the Owner dated _____, 2014, for

ELIZABETH RIVER TRAIL – PHASE 3A; VDOT PROJECT: EN00-122-138, C506 (UPC 97727)

NOW THEREFORE, if the Contractor shall promptly make payments to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the Work provided for in the Agreement, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, repairs on machinery, equipment, and tools consumed, used or rented in connection with the construction of the Work, and all insurance premiums on the Work, and for all labor performed in the Work, whether by Subcontractor or otherwise, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract Documents or to the Work to be performed thereunder, shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract Documents.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, all above parties bounded together have executed this instrument this ____ day of _____, 2014, the name and corporate seal of each corporate party being hereto affixed and those presents duly signed by its undersigned representative, pursuant to authority of its governing body.

CONTRACTOR

By: _____ (Seal)

Name: _____

Title: _____

Attest

SURETY

By: _____(Seal)

Attest

APPROVED AS TO FORM: _____, 2014

City of Norfolk, OWNER

By: _____
Deputy City Attorney

NOTE: Date of Bond shall not be prior to the date of the Agreement. If the Contractor is a partnership, all partners shall execute the Bond.

IMPORTANT: The Surety named on this Bond shall be one who is licensed to conduct business in the Commonwealth of Virginia, and named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies, as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent shall be accompanied by a certified copy of the authority to act for the Surety at the time of signing of this Bond.

End of Page

VDOT SPECIAL PROVISIONS

CIVIL RIGHTS DIVISION
REQUIREMENTS FOR THE
LOCALLY ADMINISTERED PROJECTS
(FEDERALLY FUNDED PROJECTS)

The LOCALITY, its agents, employees, assigns or successors, and any person, firm, or agency of whatever nature with whom it may contract or make an agreement, shall comply with the provisions of the Virginia Fair Employment Contracting Act, Sections 2.2-4200 through 2.2-4201 of the Code of Virginia, as amended. During the performance of this Agreement, the LOCALITY agrees as follows:

- a. The LOCALITY will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin, except where religion, sex, or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the LOCALITY. The LOCALITY agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause, including the names of all contracting agencies with which the LOCALITY has agreements of over ten thousand dollars.
- b. The LOCALITY will, in all solicitations or advertisements for employees placed by or on behalf of the LOCALITY, state that the LOCALITY is an equal opportunity employer; provided, however, that notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The LOCALITY will include the provisions of the foregoing paragraphs "a" and "b" in every subcontract or purchase order of over ten thousand dollars, so that such provisions will be binding upon each subcontractor or vendor. Nothing contained in this section shall be deemed to empower any agency to require any LOCALITY to grant preferential treatment to, or discriminate against, any individual or any group because of race, color, religion, sex or national origin on account of an imbalance which may exist with respect to the total number or percentage of persons of any race, color, religion, sex or national origin employed by such LOCALITY in comparison with the total number or percentage of persons of such race, color, religion, sex or national origin in any community or in the Commonwealth.

NON-DISCRIMINATION PROVISION: The LOCALITY agrees to abide by the provisions of Title VI and Title VII of the Civil Rights Act of 1964 (42 USC 2000e), which prohibits discrimination against any employee or applicant for employment, or any applicant or recipient of services, on the basis of race, religion, color, sex or national origin; and further agrees to abide by Executive Order No. 11246 entitled "Equal Employment Opportunity," as amended by Executive Order No. 11375 and as supplemented in the Department of Labor Regulations (41 CFR Part 60), which prohibit discrimination on the basis of age. Sections 49 CFR 21 and 26 CFR 710.405(b) are incorporated by reference in all contracts and subcontracts funded in whole or in part with federal funds. The LOCALITY shall comply with the Americans with Disabilities Act (ADA), and with the provisions of the Virginians with Disabilities Act, Sections 51.5-40 through 51.5-46 of the Code of Virginia, as amended, the terms of which are incorporated herein by reference.

In the event of the LOCALITY'S noncompliance with the nondiscrimination provisions of this Agreement, the DEPARTMENT shall impose such contract sanctions as it or the Federal Highway Administration (FHWA) may determine to be appropriate, including but not limited to:

- a. withholding of payments to the LOCALITY under this Agreement until the LOCALITY complies; and/or
- b. cancellation, termination or suspension of this Agreement, in whole or in part.

TITLE VI OF THE CIVIL RIGHTS ACT OF 1964: During the performance of this Agreement, the LOCALITY, for itself, its assignees and successors in interest, agrees as follows:

- a. Compliance with Regulations: The LOCALITY will comply with the Regulations of the United States Department of Transportation relative to nondiscrimination in Federally-assisted programs of the United States Department of Transportation (Title 49), Code of Federal Regulations, Part 21, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this Agreement.
- b. Nondiscrimination: The LOCALITY with regard to the services provided by it after award and prior to completion of this Agreement, will not discriminate on the grounds of race, color, sex, national origin, age or handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The LOCALITY will not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the services covers a program set forth in Appendix B of the Regulations.
- c. Solicitations for Subcontractors: In all solicitations, either by competitive bidding or negotiation made by the LOCALITY for work to be performed under a subcontract, including procurements of materials or equipment, each potential subcontractor or supplier shall be notified by the LOCALITY of their obligations under this Agreement.
- d. Information and Reports: The LOCALITY will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the DEPARTMENT or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of the LOCALITY is in the exclusive possession of another who fails or refuses to furnish this information, the LOCALITY shall so certify to the DEPARTMENT, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.
- e. Incorporation of Provisions: The LOCALITY will include the provisions of paragraphs "a" through "d" in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, order or instructions issued pursuant thereto. The LOCALITY will take such action with respect to any subcontractor or procurement as the DEPARTMENT or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, in the event the LOCALITY becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the LOCALITY may request the DEPARTMENT to enter into such litigation to protect the interests of the DEPARTMENT and, in addition, may request the United States to enter into such litigation to protect the interests of the United States.

CERTIFICATION REGARDING NON-SEGREGATED FACILITIES: By the execution of this Agreement, the LOCALITY certifies that it does not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not permit its employees to

perform their services at any location, under its control, where segregated facilities are maintained. It certifies further that it will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it will not permit its employees to perform their services at any location under its control, where segregated facilities are maintained. The LOCALITY further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, national origin, age or handicap, because of habit, local custom or otherwise. It agrees that, except where it has obtained identical certification from proposed subcontractors and material suppliers for specific time periods, it will obtain identical certification from proposed subcontractors or material suppliers prior to the award of subcontracts or the consummation of material supply agreements exceeding ten thousand dollars, and that it will retain such certifications in its files.

TDD/TTY EQUIPMENT FOR THE DEAF: When seeking public participation through the maintenance of a toll free hot line number and/or publishing project-related materials, the LOCALITY agrees to ensure that all citizens have equally effective communication. The LOCALITY agrees to provide or identify a telecommunications device for the deaf/teletypewriter (TDD/TTY) or acceptable means of telephone access for individuals with impaired speech or hearing. The LOCALITY will provide notice of a TDD/TTY number whenever a standard telephone number is provided.

GOAL SETTING PROCESS

DISADVANTAGED BUSINESS ENTERPRISES: The LOCALITY, its agents, employee, assigns, or successors, and any person, firm or agency of whatever nature with whom it may contract or make an agreement, shall comply with the provisions of 49 CFR, Part 26 and Part 23, as amended, which is hereby made part of this Agreement by reference. The LOCALITY shall take all necessary and reasonable steps in accordance with 49 CFR, Part 26, and Part 23 as amended, to ensure that DBE's have equal opportunity to compete for and perform on contracts and subcontracts under this Agreement.

A Disadvantaged Business Enterprise ("DBE") is a business certified in accordance with the guidelines of 49 CFR, Part 26, and Part 23, as amended, by the United States Department of Transportation designated and approved agency. A listing of certified firms can be located at www.DMBE.state.va.us or by contacting the Department of Minority Business Enterprises, 200-202 9th Street, 11th Floor, Richmond, Virginia 23219, or by calling (804) 786-6585.

DBE contract goals are established by the District Civil Rights Office (DCRO) in accordance with established Department policy.

CONSTRUCTION: The LOCALITY will submit the detail estimate for the proposed project, which includes work activities and their associated costs, and the final total cost assigned to the project, to the DCRO no later than two months prior to advertisement, in order that DBE goals can be established. Once the project has been advertised and bids received by the LOCALITY, the LOCALITY will forward the DBE information regarding DBE participation commitment from the lowest responsive and responsible bidders to the DCRO for review and recommendations regarding award of the project. The award of all bids must adhere to federal regulations, as promulgated in 49 CFR, Part 26 and Part 23 and the DEPARTMENT'S Special

Provision for Section 110.04 of the Specifications relative to ‘good faith efforts’ by contractors in making the required DBE participation. Prior to award, contractors are expected to achieve the DBE goal or demonstrate that a good faith effort has been made to achieve the goal.

After award, the LOCALITY will submit a copy of the signed contract and supporting DBE information to the DCRO. **All contractors that fail to meet the DBE goal are subject to review by the DEPARTMENT to determine whether a ‘good faith effort’ was made as outlined in 49 CFR, Parts 26.53 and Special Provision 110.04.** The locality is responsible for ensuring that the contractor achieves the goal or demonstrates that a good faith effort has been made. After award, in the event of the LOCALITY’S noncompliance with the provisions of this part, the DEPARTMENT shall impose such contract sanctions as it or the Federal Highway Administration (FHWA) may determine to be appropriate, including but not limited to:

- a. withholding of payments to the LOCALITY under this Agreement until the LOCALITY complies; and/or
- b. cancellation, termination or suspension of this Agreement, in whole or in part.

PROFESSIONAL SERVICES: The LOCALITY will submit information for the service(s) to be performed to include scope of work, reporting requirements, and duration of contract, no later than two months prior to release of Request for Proposals (RFP) to the DCRO for review, in order that a DBE goal can be established. Once the RFP has been advertised and responses received, the LOCALITY will forward to the DCRO, the results of evaluation of the proposals received to include firm data sheet, DBE subcontracting plan, letter indicating DBE agreement to perform work, and rating criteria for determining good faith effort relative to the attainment of the DBE goal. The DCRO will recommend selection of bidder for award. The award of bids must adhere to the federal regulations, as promulgated in 49 CFR, Part 26, Part 23 and the DEPARTMENT’S Special Provision for Section 110.04 of the Specifications relative to ‘good faith efforts’ by contractors in making the DBE participation. After the contract is awarded, the LOCALITY will submit a copy of the signed consultant agreement. The locality is responsible for ensuring that the contractor achieves the goal or demonstrates that a good faith effort has been made. After award, in the event of the LOCALITY’S noncompliance with the provisions of this part, the DEPARTMENT shall impose such contract sanctions as it or the Federal Highway Administration (FHWA) may determine to be appropriate, including but not limited to:

- a. withholding of payments to the LOCALITY under this Agreement until the LOCALITY complies; and/or
- b. cancellation, termination or suspension of this Agreement, in whole or in part.

COMPLIANCE MONITORING

The LOCALITY must take every reasonable step to ensure that DBEs committed to perform work under contract perform a commercially useful function (“CUF”). It is the DEPARTMENT’S responsibility to determine compliance with the commercially useful function requirement. The requirements are described in 49 CFR, Part 26.55. The DCRO will monitor construction activity to ensure that DBE firms are performing work in accordance with federal regulations. The DCRO will conduct DBE Compliance Reviews on each DBE firm performing work for participation credit/goal attainment on each project.

The LOCALITY will ensure that the DCRO receives copies of all contracts awarded and DBE subcontracts, which will initiate the monitoring process. Compliance monitoring includes: site visits, review of documents such as material tickets, subcontracts, lease agreements, etc. and any other information needed to render a compliance determination.

MONITORING PAYMENTS TO DBE FIRMS

VDOT requires that the LOCALITY maintain records and documents of payments to DBE firms for the performance of their contract or subcontract. At a minimum, these records must consist of type of work DBE firm performed, dates of work, dollar amount paid for work, and on what date payment was made. These records must be submitted on a MONTHLY basis to the DCRO for each locality. Documentation should be submitted on form C-63/A.

The LOCALITY will ensure that all DBE firms are paid promptly in accordance with 49 CFR, Part 26.29. The DEPARTMENT'S prompt pay guidelines are indicated in the DBE Program Plan.

The LOCALITY will maintain records and documents verifying DBE firms awarded contracts and subcontracts to include: name of DBE firm, indicating if firm is a certified minority or woman owned firm, type of work; and dollar value of contract or subcontract and dates work was performed.

ON THE JOB TRAINING ("OJT") PROGRAM: The LOCALITY, its agents, employees, assigns, or successors, and any person, firm or agency of whatever nature with whom it may contract or make an agreement, shall comply with the special training provisions in accordance with 23 CFR, Part 230.107(b), as amended, which is hereby made part of this Agreement by reference. The LOCALITY shall take all necessary and reasonable steps to ensure training and upgrading of minorities, women, veterans, and other disadvantaged persons toward achieving journeymen status within a given construction trade. The program seeks to reduce overhead costs associated with training through a stipend reimbursement to the contractor while offering the opportunity to enhance short and long-term workforce needs. The current OJT reimbursement rate is three dollars per trainee hour.

The OJT program requires full utilization of all available training and skill-improvement opportunities to assure the increased participation of minority groups and disadvantaged persons and women in all phases of the highway construction industry. It is the intent that each contractor's workforce and construction site should reflect the same diversity as the community.

TRAINEE GOALS

The DCRO will set a trainee goal on all federally assisted contracts in accordance with guidelines outlined in 23 CFR, Part 230, Parts 111, 113 and 117. The DCRO will determine the trainee goal prior to advertisement. The DCRO will approve all trainee enrollments to ensure that disadvantaged persons are given opportunities for training utilizing form C-65. Trainee work classifications and the requirements of each will follow those already developed by the DEPARTMENT and the Virginia Transportation Construction Alliance ("VTCA"). Copies of the OJT Trainee Classification Handbook can be obtained by contacting the DCRO.

MONITORING OF OJT PROGRAM

VDOT requires that the LOCALITY maintain records and documents of trainee enrollments to include: name of trainee, sex, gender, trainee work classification, hourly wage rates, start date, completion date and wage increments as training progressed. This information will include reason(s) trainees do not complete the training program and number of dropouts and terminations prior to completion of the training program. WEEKLY trainee records will be submitted to the DCRO on form C-67.

The LOCALITY will compile OJT records and submit them on a quarterly basis to the appropriate DCRO for each locality. Documentation will be submitted no later than the first day of the first month following the federal fiscal year quarter, which commences October 1st. The LOCALITY will submit an annual report to the appropriate DCRO no later than the third of each January for the preceding calendar year.

The LOCALITY will maintain records and documents supporting the reimbursements to contractors for each trainee hour achieved via the OJT program. These records will include: contractor's name, project number, location of project, trainee goal for the contract, name of trainee(s), trainee(s) work classifications, number of hours completed by each trainee(s), and dollar amount paid to the contractor. Civil Rights Division Trainee Certificates will be presented to each trainee completing the OJT program. It is recommended that copies of these certificates be part of the OJT trainee records.

CONTRACTOR COMPLIANCE: The LOCALITY will ensure that all contractors and subcontractors awarded work will meet contractual Equal Opportunity ("EO") requirements under Executive Order 11246, as amended, 23 U.S. C., FHWA-1273 (23 CFR, Parts 633), Section 110.03 (Equal Employment Opportunity) of Roads and Bridges Specifications and Title VI of the Civil Rights Act of 1964, as amended. All contractors and subcontractors will submit to the DCRO the required information to include the EO Policy, EO Liaison Officer, company employment (C-64) and monthly project site employment reports (C-57) as indicated in Section 110.03 of Roads and Bridges Specifications.

The DCRO will monitor for adherence to Contractor Compliance as outlined in 23 CFR, Part 230.409, 411, and 413.

The LOCALITY will forward copies of all awarded contracts to the appropriate DCRO to initiate the monitoring process. The monitoring process includes: project site visits, employee interviews, and review of documentation (subcontracts, lease agreements, material tickets, etc.). Formal Contractor Compliance EO Reviews will be conducted by the DCRO as needed. Guidance for conducting compliance reviews is provided in the Contract Compliance Plan (Part I of Affirmative Action Plan) approved by Federal Highway Administration in 2002. Copies of the Plan can be obtained from the DCRO.

REPORTING: The LOCALITY, its contractors and subcontractors having a contract or subcontract of at least \$10,000 or more is required to submit an annual employment report to the DCRO in accordance with 23 CFR, Part 230.21. The report reflects all employees on site during the third week of each month of July during which work is performed. This information will be submitted to the DCRO on form C-57 indicating number of employees in each work classification, their race and sex. All employees on site must be accounted for to include men and women, both journeymen level, trainees and apprentices.

The annual employment report will be submitted to each DCRO for each federally assisted project no later than the second week of each August.

RECORD KEEPING: The LOCALITY will maintain all records pertaining to the individual projects for five years after completion of each project. Records shall include but not be limited to contracts, subcontractors, purchase orders, material delivery tickets, lease agreements, joint check agreements, payments made to contractors, inspections and permits. This is in accordance with federal guidelines.

The LOCALITY shall provide all information and reports required by the regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, and other sources of information, and its facilities as may be determined by the DEPARTMENT or the FHWA to be pertinent to ascertain compliance with such regulations, orders and requirements.

The Department's Civil Rights Division or Office of Inspector General or FHWA will perform audits as needed to ensure compliance with all Guidelines.

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

PROJECT: EN00-122-138, C506, Phase 3A - (UPC 97727)

FHWA: 534 DATA# (4J028)

This form must be completed, signed and returned with bid; and failure to do so may result in the rejection of your bid. **THE CONTRACTOR SHALL AFFIRM THE FOLLOWING STATEMENT EITHER BY SIGNING THE AFFIDAVIT AND HAVE IT NOTARIZED OR BY SIGNING THE UNSWORN DECLARATION UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES. A SEPARATE FORM MUST BE SUBMITTED BY EACH PRINCIPAL OF A JOINT VENTURE BID.**

STATEMENT. In preparation and submission of this bid, I, the firm, corporation or officers, agents or employees thereof did not, either directly or indirectly, enter into any combination or arrangement with any persons, firm or corporation or enter into any agreement, participate in any collusion, or otherwise take any action in the restraint of free, competitive bidding in violation of the Sherman Act (15 U.S.C. Section 1) or Article 1.1 or Chapter 12 of Title 18.2 (Virginia Governmental Frauds Act), Sections 59.1-9.1 through 59.1-9.17 or Sections 59.1-68.6 through 59.1-68.8 of the Code of Virginia.

AFFIDAVIT

The undersigned is duly authorized by the bidder to make the foregoing statement to be filed with bids submitted on behalf of the bidder for contracts to be let by the Commonwealth Transportation Board.

Signed at _____, this _____ day of _____, 20 _____
County (City), STATE

By: _____
(Name of Firm) (Signature) Title (print)

STATE of _____ COUNTY (CITY) of _____

To-wit:

I _____, a Notary Public in and for the State and
County(City) aforesaid, hereby certify that this day _____

personally appeared before me and made oath that he is duly authorized to make the above statements and that such statements are true and correct.

Subscribed and sworn to before me this _____ day of _____, 20 _____
My Commission expires _____

Notary Public

OR

UNSWORN DECLARATION

The undersigned is duly authorized by the bidder to make the foregoing statement to be filed with bids submitted on behalf of the bidder for contracts to be let by the Commonwealth Transportation Board.

Signed at _____, this _____ day of _____, 20 _____
County (City), STATE

By: _____
(Name of Firm) (Signature) Title (print)

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
AFFIDAVIT

PROJECT: EN00-122-138, C506, (UPC 97727)

FHWA: 534 DATA# (4J028)

This form must be completed, signed, notarized and returned with bid; and failure to do so, may result in the rejection of your bid. A separate form must be submitted by each principal of a joint venture bid.

1. I, the firm, corporation or officers, agents or employees thereof have neither directly nor indirectly entered into any combination or arrangement with any person, firm or corporation or entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract, the effect of which is to prevent competition or increase the cost of construction or maintenance of roads or bridges.

During the preceding twelve months, I (we) have been a member of the following Highway Contractor's Associations, as defined in Section 33.1-336 of the Code of Virginia (1970). (If none, so state).

NAME	Location of Principal Office
_____	_____
_____	_____
_____	_____

2. I (we) have _____, have not _____, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that I/We have _____, have not _____, filed with the joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor [41 CFR 60-1.7(b)(1)], and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contract or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contract and subcontract unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

(Continued)

ORDER NO.:
CONTRACT ID. NO.:

Form C-105
page 2

3. The bidder certifies to the best of its knowledge and belief, that it and its principals:
- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated above; and
 - (d) Where the bidders is unable to certify to any of the statements in this certification, the bidder shall show an explanation below.

Explanations will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any explanation noted, indicate below to whom it applies, initiating agency, and dates of action. Providing false information may result in federal criminal prosecution or administration sanctions. The bidder shall provide immediate written notice to the Department if at any time the bidder learns that its certification was erroneous when submitted or has become erroneous by reason of change circumstances.

The undersigned is duly authorized by the bidder to make the foregoing statements to be filed with bids submitted on behalf of the bidder for contracts to be let by the Commonwealth Transportation Board.

Signed at _____, this ____ day of _____, 20 ____
County (City), STATE

By: _____
(Name of Firm) (Signature) Title (print)

STATE of _____ COUNTY (CITY) of _____

To-wit:

I _____, a Notary Public in and for the State and
County(City) aforesaid, hereby certify that this day _____

personally appeared before me and made oath that he is duly authorized to make the above statements and that such statements are true and correct.

Subscribed and sworn to before me this _____ day of _____, 20 ____

My Commission expires _____

Notary Public

FHWA NO. _____ DATE SUBMITTED _____

The bidder certifies this form accurately represents its solicitation and utilization or non-utilization, as indicated, of the firms listed below for performance of work on this contract. The bidder also certifies he/she has had direct contact with the named firms regarding participation on this project.

TITLE _____

SUBCONTRACTOR/SUPPLIER SOLICITATION AND UTILIZATION (ALL)

[illegible]

Elizabeth River Trail Phase IIIA

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DBE GOOD FAITH EFFORTS DOCUMENTATION

--DO NOT DETACH--

**THIS INFORMATION MUST BE SUBMITTED
WITH YOUR BID PROPOSAL IF YOUR BID DOES
NOT MEET **THE PROJECT DBE REQUIREMENTS**,
OR
WHEN REQUESTED BY VDOT**

CONTRACT I.D. NUMBER_____

PROJECT NUMBER_____

FHWA NUMBER_____

DISTRICT_____

DATE BID SUBMITTED_____

BIDDER'S NAME_____

SIGNATURE_____

TITLE_____

VENDOR NUMBER_____

DBE GOAL FROM BID PROPOSAL_____

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DBE GOOD FAITH EFFORTS DOCUMENTATION

CONTRACT I.D. NO. _____ DATE SUBMITTED _____

IF THE DBE GOAL ESTABLISHED FOR THIS CONTRACT HAS NOT BEEN MET OR VDOT REQUESTS THE SUBMITTAL THEREOF, THE BIDDER IS REQUIRED TO SUBMIT GOOD FAITH EFFORTS AS OUTLINED IN THIS DOCUMENT.

THE BIDDER ACKNOWLEDGES AND CERTIFIES THAT THIS FORM ACCURATELY REPRESENTS THE INFORMATION CONTAINED HEREIN.

BIDDER _____ SIGNATURE _____

TITLE _____

NAMES OF CERTIFIED DBEs AND THE DATES ON WHICH THEY WERE SOLICITED TO BID ON THIS PROJECT

INCLUDE THE ITEMS OF WORK OFFERED AND THE DATES AND METHODS USED FOR FOLLOWING UP INITIAL SOLICITATIONS TO DETERMINE WHETHER OR NOT DBEs WERE INTERESTED.

NAMES AND VENDOR NUMBERS OF DBEs SOLICITED	DATE OF INITIAL SOLICITATION	ITEM(S) OF WORK	FOLLOW-UP METHODS AND DATES

NOTE: ATTACH ADDITIONAL PAGES IF NECESSARY

ATTACH COPIES OF SOLICITATIONS, TELEPHONE RECORDS, FAX CONFIRMATIONS, ELECTRONIC INFORMATION, ETC.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DBE GOOD FAITH EFFORTS DOCUMENTATION

CONTRACT I.D. NO. _____ DATE SUBMITTED _____

IF THE DBE GOAL ESTABLISHED FOR THIS CONTRACT HAS NOT BEEN MET OR VDOT REQUESTS THE SUBMITTAL THEREOF, THE BIDDER IS REQUIRED TO SUBMIT GOOD FAITH EFFORTS AS OUTLINED IN THIS DOCUMENT.

THE BIDDER ACKNOWLEDGES AND CERTIFIES THAT THIS FORM ACCURATELY REPRESENTS THE INFORMATION CONTAINED HEREIN.

BIDDER _____ SIGNATURE _____

TITLE _____

TELEPHONE LOG

DBE(s) CALLED	TELEPHONE NUMBER	DATE CALLED	TIME CALLED	CONTACT PERSON OR VOICE MAIL STATUS

NOTE: ATTACH ADDITIONAL PAGES IF NECESSARY

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DBE GOOD FAITH EFFORTS DOCUMENTATION

CONTRACT I.D. NO. _____ DATE SUBMITTED _____

IF THE DBE GOAL ESTABLISHED FOR THIS CONTRACT HAS NOT BEEN MET OR VDOT REQUESTS THE SUBMITTAL THEREOF, THE BIDDER IS REQUIRED TO SUBMIT GOOD FAITH EFFORTS AS OUTLINED IN THIS DOCUMENT.

THE BIDDER ACKNOWLEDGES AND CERTIFIES THAT THIS FORM ACCURATELY REPRESENTS THE INFORMATION CONTAINED HEREIN.

BIDDER _____ SIGNATURE _____

TITLE _____

ITEM(S) OF WORK THAT THE BIDDER MADE AVAILABLE TO DBE FIRMS

IDENTIFY THOSE ITEM(S) OF WORK THAT THE BIDDER MADE AVAILABLE TO DBE FIRMS OR THOSE ITEM(S) THE BIDDER IDENTIFIED AND DETERMINED TO SUBDIVIDE INTO ECONOMICALLY FEASIBLE UNITS TO FACILITATE DBE PARTICIPATION. FOR EACH ITEM LISTED, SHOW THE DOLLAR VALUE AND PERCENTAGE OF THE TOTAL CONTRACT AMOUNT. IT IS THE BIDDER'S RESPONSIBILITY TO DEMONSTRATE THAT SUFFICIENT WORK TO MEET THE GOAL WAS MADE AVAILABLE TO DBE FIRMS.

ITEM(S) OF WORK MADE AVAILABLE	BIDDER NORMALLY PERFORMS ITEM(S) (Y/N)	ITEM(S) BROKEN DOWN TO FACILITATE PARTICIPATION (Y/N)	AMOUNT IN DOLLARS	PERCENTAGE OF CONTRACT

NOTE: INFORMATION REQUIRED FOR THIS SECTION CONTINUED ON SHEET 5
ATTACH ADDITIONAL PAGES IF NECESSARY

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DBE GOOD FAITH EFFORTS DOCUMENTATION

CONTRACT I.D. NO. _____ DATE SUBMITTED _____

IF THE DBE GOAL ESTABLISHED FOR THIS CONTRACT HAS NOT BEEN MET OR VDOT REQUESTS THE SUBMITTAL THEREOF, THE BIDDER IS REQUIRED TO SUBMIT GOOD FAITH EFFORTS AS OUTLINED IN THIS DOCUMENT.

THE BIDDER ACKNOWLEDGES AND CERTIFIES THAT THIS FORM ACCURATELY REPRESENTS THE INFORMATION CONTAINED HEREIN.

BIDDER _____ SIGNATURE _____

TITLE _____

**ADDITIONAL INFORMATION REGARDING ITEM(S) OF WORK THAT THE
BIDDER MADE AVAILABLE TO DBE FIRMS** (Continued From Sheet 4)

ITEM(S) OF WORK MADE AVAILABLE, NAMES OF SELECTED FIRMS AND DBE STATUS, DBEs THAT PROVIDED QUOTES, PRICE QUOTE FOR EACH FIRM, AND THE PRICE DIFFERENCE FOR EACH DBE IF THE SELECTED FIRM IS NOT A DBE.

ITEM(S) OF WORK MADE AVAILABLE(CONT.)	NAME OF SELECTED FIRM AND VENDOR NUMBER	DBE OR NON-DBE	NAME OF REJECTED FIRM(S)	QUOTE IN DOLLARS	PRICE DIFFERENCE IN DOLLARS

NOTE: ATTACH ADDITIONAL PAGES IF NECESSARY.

IF THE FIRM SELECTED FOR THE ITEM IS NOT A DBE, PROVIDE THE REASON(S) FOR THE SELECTION ON A SEPARATE PAGE AND ATTACH.

PROVIDE NAMES, ADDRESSES, AND TELEPHONE NUMBERS FOR THE FIRMS LISTED ABOVE.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DBE GOOD FAITH EFFORTS DOCUMENTATION

CONTRACT I.D. NO. _____ DATE SUBMITTED _____

IF THE DBE GOAL ESTABLISHED FOR THIS CONTRACT HAS NOT BEEN MET OR VDOT REQUESTS THE SUBMITTAL THEREOF, THE BIDDER IS REQUIRED TO SUBMIT GOOD FAITH EFFORTS AS OUTLINED IN THIS DOCUMENT.

THE BIDDER ACKNOWLEDGES AND CERTIFIES THAT THIS FORM ACCURATELY REPRESENTS THE INFORMATION CONTAINED HEREIN.

BIDDER _____ SIGNATURE _____

TITLE _____

ADVERTISEMENTS OR PROOFS OF PUBLICATION.

NAMES AND DATES OF EACH PUBLICATION IN WHICH A REQUEST FOR DBE PARTICIPATION FOR THE PROJECT WAS PLACED BY THE BIDDER. ATTACH COPIES OF PUBLISHED ADVERTISEMENTS OR PROOFS OF PUBLICATION.

PUBLICATIONS	DATES OF ADVERTISEMENT

NOTE: ATTACH ADDITIONAL PAGES IF NECESSARY

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DBE GOOD FAITH EFFORTS DOCUMENTATION

CONTRACT I.D. NO. _____ DATE SUBMITTED _____

IF THE DBE GOAL ESTABLISHED FOR THIS CONTRACT HAS NOT BEEN MET OR VDOT REQUESTS THE SUBMITTAL THEREOF, THE BIDDER IS REQUIRED TO SUBMIT GOOD FAITH EFFORTS AS OUTLINED IN THIS DOCUMENT.

THE BIDDER ACKNOWLEDGES AND CERTIFIES THAT THIS FORM ACCURATELY REPRESENTS THE INFORMATION CONTAINED HEREIN.

BIDDER _____ SIGNATURE _____

TITLE _____

NAMES OF AGENCIES CONTACTED TO PROVIDE ASSISTANCE

NAMES OF AGENCIES (SEE SPECIAL PROVISION FOR 107.15) AND THE DATES THESE AGENCIES WERE CONTACTED TO PROVIDE ASSISTANCE IN CONTACTING, RECRUITING, AND USING DBE FIRMS. IF THE AGENCIES WERE CONTACTED IN WRITING, ATTACH COPIES OF SUPPORTING DOCUMENTS.

NAME OF AGENCY	METHOD AND DATE OF CONTACT	RESULTS

NOTE: ATTACH ADDITIONAL PAGES IF NECESSARY.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DBE GOOD FAITH EFFORTS DOCUMENTATION

CONTRACT I.D. NO. _____ DATE SUBMITTED _____

IF THE DBE GOAL ESTABLISHED FOR THIS CONTRACT HAS NOT BEEN MET OR VDOT REQUESTS THE SUBMITTAL THEREOF, THE BIDDER IS REQUIRED TO SUBMIT GOOD FAITH EFFORTS AS OUTLINED IN THIS DOCUMENT.

THE BIDDER ACKNOWLEDGES AND CERTIFIES THAT THIS FORM ACCURATELY REPRESENTS THE INFORMATION CONTAINED HEREIN.

BIDDER _____ SIGNATURE _____

TITLE _____

TECHNICAL ASSISTANCE AND INFORMATION PROVIDED TO DBEs

EFFORTS MADE TO PROVIDE INTERESTED DBEs WITH ADEQUATE INFORMATION ABOUT THE PLANS, SPECIFICATIONS, AND REQUIREMENTS OF THE BID DOCUMENTS TO ASSIST THE DBEs IN RESPONDING TO A SOLICITATION.

IDENTIFY THE DBEs ASSISTED, THE INFORMATION PROVIDED, AND THE DATE OF CONTACT. ATTACH COPIES OF SUPPORTING DOCUMENTS.

DBEs ASSISTED	INFORMATION PROVIDED	DATE OF CONTACT

NOTE: ATTACH ADDITIONAL PAGES IF NECESSARY.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DBE GOOD FAITH EFFORTS DOCUMENTATION

CONTRACT I.D. NO. _____ DATE SUBMITTED _____

IF THE DBE GOAL ESTABLISHED FOR THIS CONTRACT HAS NOT BEEN MET OR VDOT REQUESTS THE SUBMITTAL THEREOF, THE BIDDER IS REQUIRED TO SUBMIT GOOD FAITH EFFORTS AS OUTLINED IN THIS DOCUMENT.

THE BIDDER ACKNOWLEDGES AND CERTIFIES THAT THIS FORM ACCURATELY REPRESENTS THE INFORMATION CONTAINED HEREIN.

BIDDER _____ SIGNATURE _____

TITLE _____

EFFORTS MADE TO ASSIST DBEs OBTAIN BONDING, LINES OF CREDIT, INSURANCE, ETC.

EFFORTS MADE TO PROVIDE INTERESTED DBEs IN OBTAINING BONDING, LINES OF CREDIT, INSURANCE, NECESSARY EQUIPMENT, SUPPLIES, MATERIALS, OR RELATED ASSISTANCE OR SERVICES, EXCLUDING SUPPLIES AND EQUIPMENT THE SUBCONTRACTOR PURCHASES OR LEASES FROM THE PRIME CONTRACTOR OR ITS AFFILIATES.

IDENTIFY THE DBEs ASSISTED, THE ASSISTANCE OFFERED, AND THE DATES OF SERVICES OFFERED AND PROVIDED. ATTACH COPIES OF SUPPORTING DOCUMENTS.

DBEs ASSISTED	ASSISTANCE OFFERED	DATES SERVICES OFFERED AND/OR PROVIDED

NOTE: ATTACH ADDITIONAL PAGES IF NECESSARY.

FHWA NO. _____

THIS FORM CAN BE USED BY THE CONTRACTOR TO SUBMIT THE NAMES OF DBE FIRMS TO BE UTILIZED ON THE PROJECT. THE CONTRACTOR SHALL INDICATE THE DESCRIPTION OF THE CATEGORY (S, M, SP or H) AND THE TYPE OF WORK THAT EACH DBE WILL PERFORM AND THE ALLOWABLE CREDIT PER ITEM(S). ADDITIONAL SHEETS TO SHOW THE ALLOWABLE CREDIT PER ITEM MAY BE ATTACHED IF NECESSARY. **PLEASE NOTE:** THE AMOUNT OF ALLOWABLE CREDIT FOR A DBE SUPPLIER IS 60% OF THE TOTAL COST OF THE MATERIALS OR SUPPLIES OBTAINED AND 100% FOR A DBE MANUFACTURER OF THE MATERIALS AND SUPPLIES OBTAINED. A CONTRACTOR MAY COUNT 100% OF THE FEES PAID TO A DBE HAULER FOR THE DELIVERY OF MATERIALS AND SUPPLIES TO THE PROJECT SITE, BUT NOT FOR THE COST OF THE MATERIALS AND SUPPLIES THEMSELVES.

PERCENT ATTAINED BY BIDDER	%
100	100
90	100
80	100
70	100
60	100
50	100
40	100
30	100
20	100
10	100
0	100

TOTAL \$

_____ BY _____
TITLE DATE

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
CERTIFICATION OF BINDING AGREEMENT
WITH
DISADVANTAGED BUSINESS ENTERPRISE FIRMS**

Project No.:

Federal Project No.:

This form is to be submitted in accordance with the Department's Special Provision for Section 107.15.

It is hereby certified by the below signed Contractors that there exists a written quote, acceptable to the parties involved preliminary to a binding subcontract agreement stating the details concerning the work to be performed and the price which will be paid for the aforementioned work. This document is not intended to, nor should it be construed to, contain the entire text of the agreement between the contracting parties. This document does not take the place of, nor may it be substituted for, an official subcontracting agreement in those situations that may require such an agreement. A copy of the fully executed *subcontract agreement* shall be submitted to the Engineer within fourteen (14) business days after contract execution.

It is further certified that the aforementioned mutually acceptable quote and fully executed subcontract agreement represent the entire agreement between the parties involved and that no conversations, verbal agreements, or other forms of non-written representations shall serve to add to, delete, or modify the terms as stated.

The prime Contractor further represents that the aforementioned mutually acceptable quote and fully executed subcontract agreement shall remain on file for a period of not less than one year following completion of the prime's contract with the Department or for such longer period as provisions of governing Federal or State law or regulations may require. For purposes of this form, the term Prime Contractor shall refer to any Contractor utilizing a DBE subcontractor, regardless of tier, in which they are claiming DBE credit toward the contract goal.

Contractors further jointly and severally represent that said binding agreement is for the performance of a "commercially useful function" as that term is employed in 49 C.F.R. Part 26.55 (c), (d).

**TO BE SIGNED BY THE SUBCONTRACTOR TO THE PRIME CONTRACTOR, AND ANY LOWER TIER
SUBCONTRACTORS HAVING A CONTRACT WITH THE BELOW NAMED DBE FIRM**

Prime Contractor _____

By: _____
Signature Title

Date: _____

First Tier
Subcontractor if
Applicable

By: _____
Signature Title

Date: _____

Second Tier
Subcontractor if
Applicable

By: _____
Signature Title

Date: _____

Third Tier
Subcontractor if
Applicable

By: _____
Signature Title

Date: _____

DBE Contractor

By: _____
Signature Title

Date: _____

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SECTION 107.15

December 10, 2010

Section 107.15 of the Specifications is replaced by the following:

Section 107.15—Use of Disadvantaged Business Enterprises (DBEs)

A. Disadvantaged Business Enterprise (DBE) Program Requirements

Any Contractor, subcontractor, supplier, DBE firm, and contract surety involved in the performance of work on a federal-aid contract shall comply with the terms and conditions of the United States Department of Transportation (USDOT) DBE Program as the terms appear in Part 26 of the Code of Federal Regulations (49 CFR as amended), the USDOT DBE Program regulations; and the Virginia Department of Transportation's (VDOT or the Department) Road and Bridge Specifications and DBE Program rules and regulations.

For the purposes of this provision, Contractor is defined as the Prime Contractor of the contract; and sub-contractor is defined as any DBE supplier, manufacturer, or subcontractor performing work or furnishing material, supplies or services to the contract. The Contractor shall physically include this same contract provision in every supply or work/service subcontract that it makes or executes with a subcontractor having work for which it intends to claim credit.

In accordance with 49 CFR Part 26 and VDOT's DBE Program requirements, the Contractor, for itself and for its subcontractors and suppliers, whether certified DBE firms or not, shall commit to complying fully with the auditing, record keeping, confidentiality, cooperation, and anti-intimidation or retaliation provisions contained in those federal and state DBE Program regulations. By bidding on this contract, and by accepting and executing this contract, the Contractor agrees to assume these contractual obligations and to bind the Contractor's subcontractors contractually to the same at the Contractor's expense.

The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award, administration, and performance of this contract. Failure by the Contractor to carry out these requirements is a material breach of this contract, which will result in the termination of this contract or other such remedy, as VDOT deems appropriate.

All administrative remedies noted in this provision are automatic unless the Contractor exercises the right of appeal within the required timeframe(s) specified herein. Appeal requirements, processes, and procedures shall be in accordance with guidelines stated herein and current at the time of the proceedings. Where applicable, the Department will notify the Contractor of any changes to the appeal requirements, processes, and procedures after receiving notification of the Contractor's desire to appeal.

All time frames referenced in this provision are expressed in business days unless otherwise indicated. Should the expiration of any deadline fall on a weekend or holiday, such deadline will automatically be extended to the next normal business day.

B. DBE Certification

The only DBE firms eligible to perform work on a federal-aid contract for DBE contract goal credit are firms certified as Disadvantaged Business Enterprises by the Virginia Department of Minority Business Enterprise (DMBE) or the Metropolitan Washington Airports Authority (MWAA) in accordance with federal and VDOT guidelines. DBE firms must be certified in the specific work listed for DBE contract goal credit. A directory listing of certified DBE firms can be obtained from the Virginia Department of Minority Business Enterprise and the Metropolitan Washington Airports Authority Internet websites: <http://www.dmbv.virginia.gov/> ; <http://mwaa.com/362.htm>

C. Bank Services

The Contractor and each subcontractor are encouraged to use the services of banks owned and controlled by socially and economically disadvantaged individuals. Such banking services and the fees charged for services typically will not be eligible for DBE Program contract goal credit. Such information is available from the VDOT's Internet Civil Rights Division website: <http://insidevdot/C7/Civil%20Rights/default.aspx>

D. DBE Program-Related Certifications Made by Bidders\Contractors

By submitting a bid and by entering into any contract on the basis of that bid, the bidder/Contractor certifies to each of the following DBE Program-related conditions and assurances:

1. That the management and bidding officers of its firm agree to comply with the bidding and project construction and administration obligations of the USDOT DBE Program requirements and regulations of 49 CFR Part 26 as amended, and VDOT's Road and Bridge Specifications and DBE Program requirements and regulations.
2. Under penalty of perjury and other applicable penal law that it has complied with the DBE Program requirements in submitting the bid, and shall comply fully with these requirements in the bidding, award, and execution of the contract.
3. To ensure that DBE firms have been given full and fair opportunity to participate in the performance of the contract. The bidder certifies that all reasonable steps were, and will be, taken to ensure that DBE firms had, and will have, an opportunity to compete for and perform work on the contract. The bidder further certifies that the bidder shall not discriminate on the basis of race, color, age, national origin, or sex in the performance of the contract or in the award of any subcontract. Any agreement between a bidder and a DBE whereby the DBE promises not to provide quotations for performance of work to other bidders is prohibited.
4. As a bidder, good faith efforts were made to obtain DBE participation in the proposed contract at or above the goal for DBE participation established by VDOT. It has submitted as a part of its bid true, accurate, complete, and detailed documentation of the good faith efforts it performed to meet the contract goal for DBE participation. The bidder, by signing and submitting its bid, certifies the DBE participation information submitted within the stated time thereafter is true, correct, and complete, and that the information provided includes the names of all DBE firms that will participate in the contract, the specific line item(s) that each listed DBE firm will perform, and the creditable dollar amounts of the participation of each listed DBE. The specific line item must reference the VDOT line number and item number contained in the proposal.

5. The bidder further certifies, by signing its bid, it has committed to use each DBE firm listed for the specific work item shown to meet the contract goal for DBE participation. Award of the contract will be conditioned upon meeting these and other listed requirements of 49 CFR Part 26.53 and the contract documents. By signing the bid, the bidder certifies on work that it proposes to sublet; it has made good faith efforts to seek out and consider DBEs as potential subcontractors. The bidder shall contact DBEs to solicit their interest, capability, and prices in sufficient time to allow them to respond effectively, and shall retain on file proper documentation to substantiate its good faith efforts. Award of the contract will be conditioned upon meeting these and other listed requirements of 49 CFR Part 26.53 and the contract documents.
6. Once awarded the contract, the Contractor shall make good faith efforts to utilize DBE firms to perform work designated to be performed by DBEs at or above the amount or percentage of the dollar value specified in the bidding documents. Further, the Contractor understands it shall not unilaterally terminate, substitute for, or replace any DBE firm that was designated in the executed contract in whole or in part with another DBE, any non-DBE firm, or with the Contractor's own forces or those of an affiliate of the Contractor without the prior written consent of VDOT as set out within the requirements of this provision.
7. Once awarded the contract, the Contractor shall designate and make known to the Department a liaison officer who is assigned the responsibility of administering and promoting an active and inclusive DBE program as required by 49 CFR Part 26 for DBEs. The designation and identity of this officer need be submitted only once by the Contractor during any twelve (12) month period at the preconstruction conference for the first contract the Contractor has been awarded during that reporting period. The Department will post such information for informational and administrative purposes at VDOT's Internet Civil Rights Division website.
8. Once awarded the contract, the Contractor shall comply fully with all regulatory and contractual requirements of the USDOT DBE Program, and that each DBE firm participating in the contract shall fully perform the designated work items with the DBE's own forces and equipment under the DBE's direct supervision, control, and management. Where a contract exists and where the Contractor, DBE firm, or any other firm retained by the Contractor has failed to comply with federal or VDOT DBE Program regulations and/or their requirements on that contract, VDOT has the authority and discretion to determine the extent to which the DBE contract regulations and/or requirements have not been met, and will assess against the Contractor any remedies available at law or provided in the contract in the event of such a contract breach.
9. In the event a bond surety assumes the completion of work, if for any reason VDOT has terminated the prime Contractor, the surety shall be obligated to meet the same DBE contract terms and requirements as were required of the original prime Contractor in accordance with the requirements of this specification.

E. Disqualification of Bidder

Bidders may be disqualified from bidding for failure to comply with the requirements of this Special Provision, the contract specifications, and VDOT Road and Bridge Specifications.

F. Bidding Procedures

The following bidding procedures shall apply to the contract for DBE Program compliance purposes:

1. **Contract Goal, Good Faith Efforts Specified:** All bidders evidencing the attainment of DBE goal commitment equal to or greater than the required DBE goal established for the project must submit completed Form C-111, Minimum DBE Requirements, and Form C-48, Subcontractor/Supplier Solicitation and Utilization, as a part of the bid documents.

Form C-111 may be submitted electronically or may be faxed to the Department, but in no case shall the bidder's Form C-111 be received later than 10:00 a.m. the next business day after the time stated in the bid proposal for the receipt of bids. Form C-48 must be received within ten (10) business days after the bid opening.

If, at the time of submitting its bid, the bidder knowingly cannot meet or exceed the required DBE contract goal, it shall submit Form C-111 exhibiting the DBE participation it commits to attain as a part of its bid documents. The bidder shall then submit Form C-49, DBE Good Faith Efforts Documentation, within two (2) business days after the bid opening.

The lowest responsive and responsible bidder must submit its properly executed Form C-112, Certification of Binding Agreement, within three (3) business days after the bids are received. DBEs bidding as prime contractors are not required to submit Form C-112 unless they are utilizing other DBEs as subcontractors.

If, after review of the apparent lowest bid, VDOT determines the DBE requirements have not been met, the apparent lowest successful bidder must submit Form C-49, DBE Good Faith Efforts Documentation, which must be received by the Contract Engineer within two (2) business days after official notification of such failure to meet the aforementioned DBE requirements.

Forms C-48, C-49, C-111, and C-112 can be obtained from the VDOT website at:
<http://vdotforms.vdot.virginia.gov/>

Instructions for submitting Form C-111 can be obtained from the VDOT website at:
http://www.virginiadot.org/business/resources/const/Exp_DB_E_Commitments.pdf

2. **Bid Rejection:** The failure of a bidder to submit the required documentation within the timeframes specified in the **Contract Goal, Good Faith Efforts Specified** section of this Special Provision may be cause for rejection of that bidder's bid.

If the lowest bidder is rejected for failure to submit the required documentation in the specified time frames, the Department may award the work to the next lowest bidder, or re-advertise the proposed work at a later date or proceed otherwise as determined by the Commonwealth.

3. **Good Faith Efforts Described:** In order to award a contract to a bidder that has failed to meet DBE contract goal requirements, VDOT will determine if the bidder's efforts were adequate good faith efforts, and if given all relevant circumstances, those efforts were made actively and aggressively to meet the DBE requirements. Efforts to obtain DBE participation are not good faith efforts if they could not reasonably be expected to produce a level of DBE participation sufficient to meet the DBE Program and contract goal requirements.

Good faith efforts may be determined through use of the following list of the types of actions the bidder may make to obtain DBE participation. This is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts of similar intent may be relevant in appropriate cases:

- (a) Soliciting through reasonable and available means, such as but not limited to, attendance at pre-bid meetings, advertising, and written notices to DBEs who have the capability to perform the work of the contract. Examples include: advertising in at least one daily/weekly/monthly newspaper of general circulation, as applicable; phone contact with a completely documented telephone log, including the date and time called, contact person, or voice mail status; and internet contacts with supporting documentation, including dates advertised. The bidder shall solicit this interest no less than five (5) business days before the bids are due so that the solicited DBEs have enough time to reasonably respond to the solicitation. The bidder shall determine with certainty if the DBEs are interested by taking reasonable steps to follow up initial solicitations as evidenced by documenting such efforts as requested on Form C-49, DBE Good Faith Efforts Documentation.
- (b) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Contractor might otherwise prefer to completely perform all portions of this work in its entirety or use its own forces;
- (c) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner, which will assist the DBEs in responding to a solicitation;
- (d) Negotiating for participation in good faith with interested DBEs;
 - 1. Evidence of such negotiation shall include the names, addresses, and telephone numbers of DBEs that were considered; dates DBEs were contacted; a description of the information provided regarding the plans, specifications, and requirements of the contract for the work selected for subcontracting; and, if insufficient DBE participation seems likely, evidence as to why additional agreements could not be reached for DBEs to perform the work;
 - 2. A bidder using good business judgment should consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and should take a firm's price, qualifications, and capabilities, as well as contract goals, into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not sufficient reason for a bidder's failure to meet the contract goal for DBE participation, as long as such costs are reasonable and comparable to costs customarily appropriate to the type of work under consideration. Also, the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make diligent good faith efforts. Bidders are not, however, required to accept higher quotes from DBEs if the price difference can be shown by the bidder to be excessive, unreasonable, or greater than would normally be expected by industry standards;
- (e) A bidder cannot reject a DBE as being unqualified without sound reasons based on a thorough investigation of the DBE's capabilities. The DBE's standing within its industry, membership in specific groups, organizations, associations, and political or social affiliations, and union vs. non-union employee status are not legitimate causes

for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal for DBE participation;

- (f) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by VDOT or by the bidder/Contractor;
- (g) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services subject to the restrictions contained in these provisions;
- (h) Effectively using the services of appropriate personnel from VDOT and from DMBE; available minority/women community or minority organizations; contractors' groups; local, state, and Federal minority/ women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and utilization of qualified DBEs.

G. Documentation and Administrative Reconsideration of Good Faith Efforts

During Bidding: As described in the **Contract Goal, Good Faith Efforts Specified** section of this Special Provision, the bidder must provide Form C-49, DBE Good Faith Efforts Documentation, of its efforts made to meet the DBE contract goal as proposed by VDOT within the time frame specified in this provision. The means of transmittal and the risk for timely receipt of this information shall be the responsibility of the bidder. The bidder shall attach additional pages to the certification, if necessary, in order to fully detail specific good faith efforts made to obtain the DBE firms participation in the proposed contract work.

However, regardless of the DBE contract goal participation level proposed by the bidder or the extent of good faith efforts shown, all bidders shall timely and separately file their completed and executed forms C-111, C-112, C-48, and C-49, as aforementioned, or face potential bid rejection.

If a bidder does not submit its completed and executed forms C-111, or C-112, when required by this Special Provision, the bidder's bid will be considered non-responsive and may be rejected.

Where the Department upon initial review of the bid results determines the apparent low bidder has failed or appears to have failed to meet the requirements of the **Contract Goal, Good Faith Efforts Specified** section of this Special Provision and has failed to adequately document that it made a good faith effort to achieve sufficient DBE participation as specified in the bid proposal, that firm upon notification of the Department's initial determination will be offered the opportunity for administrative reconsideration before VDOT rejects that bid as non-responsive. The bidder shall address such request for reconsideration in writing to the Contract Engineer within five (5) business days of receipt of notification by the Department and shall be given the opportunity to discuss the issue and present its evidence in person to the Administrative Reconsideration Panel. The Administrative Reconsideration Panel will be made up of VDOT Division Administrators or their designees, none of who took part in the initial determination that the bidder failed to make the goal or make adequate good faith efforts to do so. After reconsideration, VDOT shall notify the bidder in writing of its decision and explain the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so.

If, after reconsideration, the Department determines the bidder has failed to meet the requirements of the contract goal and has failed to make adequate good faith efforts to achieve the level of DBE participation as specified in the bid proposal, the bidder's bid will be rejected.

If sufficient documented evidence is presented to demonstrate that the apparent low bidder made reasonable good faith efforts, the Department will award the contract and reduce the DBE requirement to the actual commitment identified by the lowest successful bidder at the time of its bid. The Contractor is still encouraged to seek additional DBE participation during the life of the contract.

However, such action will not relieve the Contractor of its responsibility for complying with the reduced DBE requirement during the life of the contract or any administrative sanctions as may be appropriate.

During the Contract: If a DBE, through no fault of the Contractor, is unable or unwilling to fulfill his agreement with the Contractor, the Contractor shall immediately notify the Department and provide all relevant facts. If a Contractor relieves a DBE subcontractor of the responsibility to perform work under their subcontract, the Contractor is encouraged to take the appropriate steps to obtain a DBE to perform an equal dollar value of the remaining subcontracted work. In such instances, the Contractor is expected to seek DBE participation towards meeting the goal during the performance of the contract.

If the Contractor fails to conform to the schedule of DBE participation as shown on the progress schedule, or at any point at which it is clearly evident that the remaining dollar value of allowable credit for performing work is insufficient to obtain the scheduled participation, and the Contractor has not taken the preceding actions, the Contractor and any aforementioned affiliates may be subject to disallowance of DBE credit until such time as conformance with the schedule of DBE participation is achieved.

Project Completion: If the Contractor fails upon completion of the project to meet the required participation, the Contractor and any prime contractual affiliates, as in the case of a joint venture, may be enjoined from bidding as a prime Contractor, or participating as a subcontractor on VDOT projects for a period of 90 days.

Prior to enjoinder from bidding or denial to participate as a subcontractor for failure to comply with participation requirements, as provided hereinbefore, the Contractor may submit documentation to the State Construction Engineer to substantiate that failure was due solely to quantitative underrun(s), elimination of items subcontracted to DBEs, or to circumstances beyond their control, and that all feasible means have been used to obtain the required participation. The State Construction Engineer upon verification of such documentation shall make a determination whether or not the Contractor has met the requirements of the contract.

If it is determined that the aforementioned documentation is insufficient or the failure to meet required participation is due to other reasons, the Contractor may request an appearance before the Administrative Reconsideration Panel to establish that all feasible means were used to meet such participation requirements. The decision of the Administrative Reconsideration Panel shall be administratively final. If the decision is made to enjoin the Contractor from bidding on other VDOT work as described herein, the enjoinder period will begin upon the Contractor's failure to request a hearing within the designated time frame or upon the Administrative Reconsideration Panel's decision to enjoin, as applicable.

H. DBE Participation for Contract Goal Credit

DBE participation on the contract will count toward meeting the DBE contract goal in accordance with the following criteria:

1. Cost-plus subcontracts will not be considered to be in accordance with normal industry practice and will not normally be allowed for credit.
2. The applicable percentage of the total dollar value of the contract or subcontract awarded to the DBE will be counted toward meeting the contract goal for DBE participation in accordance with the **DBE Program-Related Certifications Made by Bidders\Contractors** section of this Special Provision for the value of the work, goods, or services that are actually performed or provided by the DBE firm itself or subcontracted by the DBE to other DBE firms.
3. When a DBE performs work as a participant in a joint venture with a non-DBE firm, the Contractor may count toward the DBE goal only that portion of the total dollar value of the contract equal to the distinctly defined portion of the contract work that the DBE has performed with the DBE's own forces or in accordance with the provisions of this Section. The Department shall be contacted in advance regarding any joint venture involving both a DBE firm and a non-DBE firm to coordinate Department review and approval of the joint venture's organizational structure and proposed operation where the Contractor seeks to claim the DBE's credit toward the DBE contract goal.
4. When a DBE subcontracts part of the work of the contract to another firm, the value of that subcontracted work may be counted toward the DBE contract goal only if the DBE's subcontractor at a lower tier is a certified DBE. Work that a DBE subcontracts to either a non-DBE firm or to a non-certified DBE firm will not count toward the DBE contract goal. The cost of supplies and equipment a DBE subcontractor purchases or leases from the prime Contractor or the prime's affiliated firms will not count toward the contract goal for DBE participation.
5. The Contractor may count expenditures to a DBE subcontractor toward the DBE contract goal only if the DBE performs a Commercially Useful Function (CUF) on that contract.
6. A Contractor may not count the participation of a DBE subcontractor toward the Contractor's final compliance with the DBE contract goal obligations until the amount being counted has actually been paid to the DBE. A Contractor may count sixty (60) percent of its expenditures actually paid for materials and supplies obtained from a DBE certified as a regular dealer, and one hundred (100) percent of such expenditures actually paid for materials and supplies obtained from a certified DBE manufacturer.
 - (a) For the purposes of this Special Provision, a regular dealer is defined as a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles, or equipment required and used under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the DBE firm shall be an established business that regularly engages, as its principal business and under its own name, in the purchase and sale or lease of the products or equipment in question. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions will not be considered regular dealers.
 - (b) A DBE firm may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business where it keeps such items in stock if the DBE both owns and operates distribution equipment for the products it sells and provides for the contract work.

Any supplementation of a regular dealer's own distribution equipment shall be by a long-term lease agreement and not on an *ad hoc* or contract-by-contract basis to be eligible for credit to meet the DBE contract goal.

- (c) If a DBE regular dealer is used for DBE contract goal credit, no additional credit will be given for hauling or delivery to the project site goods or materials sold by that DBE regular dealer. Those delivery costs shall be deemed included in the price charged for the goods or materials by the DBE regular dealer, who shall be responsible for their distribution.
- (d) For the purposes of this Special Provision, a manufacturer will be defined as a firm that operates or maintains a factory or establishment that produces on the premises the materials, supplies, articles, or equipment required under the contract and of the general character described by the project specifications. A manufacturer shall include firms that produce finished goods or products from raw or unfinished material, or purchase and substantially alter goods and materials to make them suitable for construction use before reselling them.
- (g) A Contractor may count toward the DBE contract goal the following expenditures to DBE firms that are not regular dealers or manufacturers for DBE program purposes:
 - 1. The entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant or managerial services, or for providing bonds or insurance specifically required for the performance of the federal-aid contract, if the fee is reasonable and not excessive or greater than would normally be expected by industry standards for the same or similar services.
 - 2. The entire amount of that portion of the construction contract that is performed by the DBE's own forces and equipment under the DBE's supervision. This includes the cost of supplies and materials ordered and paid for by the DBE for contract work, including supplies purchased or equipment leased by the DBE, except supplies and equipment a DBE subcontractor purchases or leases from the prime Contractor or its affiliates.
- (h) A Contractor may count toward the DBE contract goal one hundred (100) percent of the fees paid to a DBE trucker or hauler for the delivery of material and supplies required on the project job site, but not for the cost of those materials or supplies themselves, provided that the trucking or hauling fee is determined by VDOT to be reasonable, as compared with fees customarily charged by non-DBE firms for similar services. A Contractor shall not count costs for the removal or relocation of excess material from or on the job site when the DBE trucking company is not the manufacturer of or a regular dealer in those materials and supplies. The DBE trucking firm shall also perform a Commercially Useful Function (CUF) on the project and not operate merely as a pass through for the purposes of gaining credit toward the DBE contract goal. Prior to submitting a bid, the Contractor shall determine, or contact the VDOT Civil Rights Division or its district Offices for assistance in determining, whether a DBE trucking firm will meet the criteria for performing a CUF on the project. See section on **Miscellaneous DBE Program Requirements; Factors used to Determine if a DBE Trucking Firm is Performing a CUF.**
- (i) The Contractor will receive DBE contract goal credit for the fees or commissions charged by and paid to a DBE broker who arranges or expedites sales, leases, or other project work or service arrangements provided that those fees are determined by VDOT to be reasonable and not excessive as compared with fees customarily charged by non-DBE firms for similar services. For the purposes of this Special

Provision, a broker is defined as a person or firm that regularly engages in arranging for delivery of material, supplies, and equipment, or regularly arranges for the providing of project services as a course of routine business but does not own or operate the delivery equipment necessary to transport materials, supplies, or equipment to or from a job site.

I. Performing a Commercially Useful Function (CUF)

No credit toward the DBE contract goal will be allowed for contract payments or expenditures to a DBE firm if that DBE firm does not perform a CUF on that contract. A DBE performs a CUF when the DBE is solely responsible for execution of a distinct element of the contract work and the DBE actually performs, manages, and supervises the work involved with the firm's own forces or in accordance with the provisions of the **DBE Participation for Contract Goal Credit** section of this Special Provision. To perform a CUF the DBE alone shall be responsible and bear the risk for the material and supplies used on the contract, selecting a supplier or dealer from those available, negotiating price, determining quality and quantity, ordering the material and supplies, installing those materials with the DBE's own forces and equipment, and paying for those materials and supplies. The amount the DBE firm is to be paid under the contract shall be commensurate with the work the DBE actually performs and the DBE credit claimed for the DBE's performance.

Monitoring CUF Performance: It shall be the Contractor's responsibility to ensure that all DBE firms selected for subcontract work on the contract, for which he seeks to claim credit toward the contract goal, perform a CUF. Further, the Contractor is responsible for and shall ensure that each DBE firm fully performs the DBE's designated tasks with the DBE's own forces and equipment under the DBE's own direct supervision and management or in accordance with the provisions of the **DBE Participation for Contract Goal Credit** section of this Special Provision. For the purposes of this provision the DBE's equipment will mean either equipment directly owned by the DBE as evidenced by title, bill of sale or other such documentation, or leased by the DBE, and over which the DBE has control as evidenced by the leasing agreement from a firm not owned in whole or part by the prime Contractor or an affiliate of the Contractor under this contract.

VDOT will monitor the Contractor's DBE involvement during the performance of the contract. However, VDOT is under no obligation to warn the Contractor that a DBE's participation will not count toward the goal.

DBEs Must Perform a Useful and Necessary Role in Contract Completion: A DBE does not perform a commercially useful function if the DBE's role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation.

DBEs Must Perform The Contract Work With Their Own Workforces: If a DBE does not perform and exercise responsibility for at least thirty (30) percent of the total cost of the DBE's contract with the DBE's own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involve, VDOT will presume that the DBE is not performing a CUF and such participation will not be counted toward the contract goal.

VDOT Makes Final Determination On Whether a CUF Is Performed: VDOT has the final authority to determine whether a DBE firm has performed a CUF on a federal-aid contract. To determine whether a DBE is performing or has performed a CUF, VDOT will evaluate the amount of work subcontracted by that DBE firm or performed by other firms and the extent of the involvement of other firms' forces and equipment. Any DBE work performed by the Contractor or by employees or equipment of the Contractor shall be subject to disallowance

under the DBE Program, unless the independent validity and need for such an arrangement and work is demonstrated.

J. Verification of DBE Participation and Imposed Damages

Within fourteen days after contract execution, the Contractor shall submit to the Responsible Engineer, with a copy to the District Civil Rights Office (DCRO), a fully executed subcontract agreement for each DBE used to claim credit in accordance with the requirements stated on Form C-112. The subcontract agreement shall be executed by both parties stating the work to be performed, the details or specifics concerning such work, and the price which will be paid to the DBE subcontractor. Because of the commercial damage that the Contractor and its DBE subcontractor could suffer if their subcontract pricing, terms, and conditions were known to competitors, the Department staff will treat subcontract agreements as proprietary Contractor trade secrets with regard to Freedom of Information Act requests. In lieu of subcontract agreements, purchase orders may be submitted for haulers, suppliers, and manufacturers. These too, will be treated confidentially and protected. Such purchase orders must contain, as a minimum, the following information: authorized signatures of both parties; description of the scope of work to include contract item numbers, quantities, and prices; and required federal contract provisions.

The Contractor shall also furnish, and shall require each subcontractor to furnish, information relative to all DBE involvement on the project for each quarter during the life of the contract in which participation occurs and verification is available. The information shall be indicated on Form C-63, DBE and SWAM Payment Compliance Report. The department reserves the right to request proof of payment via copies of cancelled checks with appropriate identifying notations. Failure to provide Form C-63 to the District Civil Rights Office (DCRO) within five (5) business days after the reporting period may result in delay of approval of the Contractor's monthly progress estimate for payment. The names and certification numbers of DBE firms provided by the Contractor on the various forms indicated in this Special Provision shall be exactly as shown on the DMBE's or MWAA's latest list of certified DBEs. Signatures on all forms indicated herein shall be those of authorized representatives of the Contractor as shown on the Prequalification Application, Form C-32 or the Prequalification/Certification Renewal Application, Form C-32A, or authorized by letter from the Contractor. If DBE firms are used which have not been previously documented with the Contractor's bid and for which the Contractor now desires to claim credit toward the project goal, the Contractor shall be responsible for submitting necessary documentation in accordance with the procedures stipulated in this Special Provision to cover such work prior to the DBE beginning work.

Form C-63 can be obtained from the VDOT website at: <http://vdotforms.vdot.virginia.gov/>

The Contractor shall submit to the Responsible Engineer its progress schedule with a copy to the DCRO, as required by Section 108.03 of the Specifications or other such specific contract scheduling specification that may include contractual milestones, i.e., monthly or VDOT requested updates. The Contractor shall include a narrative of applicable DBE activities relative to work activities of the Contractor's progress schedule, including the approximate start times and durations of all DBE participation to be claimed for credit that shall result in full achievement of the DBE goal required in the contract.

On contracts awarded on the basis of good faith efforts, narratives or other agreeable format of schedule information requirements and subsequent progress determination shall be based on the commitment information shown on the latest Form C-111 as compared with the appropriate Form C-63.

Prior to beginning any major component or quarter of the work, as applicable, in which DBE work is to be performed, the Contractor shall furnish a revised Form C-111 showing the name(s) and certification number(s) of any current DBEs not previously submitted who will

perform the work during that major component or quarter for which the Contractor seeks to claim credit toward the contract DBE goal. The Contractor shall obtain the prior approval of the Department for any assistance it may provide to the DBE beyond its existing resources in executing its commitment to the work in accordance with the requirements listed in the **Good Faith Efforts Described** section of this Special Provision. If the Contractor is aware of any assistance beyond a DBE's existing resources that the Contractor, or another subcontractor, may be contemplating or may deem necessary and that have not been previously approved, the Contractor shall submit a new or revised narrative statement for VDOT's approval prior to assistance being rendered.

If the Contractor fails to comply with correctly completing and submitting any of the required documentation requested by this provision within the specified time frames, the Department will withhold payment of the monthly progress estimate until such time as the required submissions are received VDOT. Where such failures to provide required submittals or documentation are repeated the Department will move to enjoin the Contractor and any prime contractual affiliates, as in the case of a joint venture, from bidding as a prime Contractor, or participating as a subcontractor on VDOT projects until such submissions are received.

K. Documentation Required for Semi-final Payment

On those projects nearing completion, the Contractor must submit Form C-63 marked "Semi-Final" within twenty (20) days after the submission of the last regular monthly progress estimate to the DCRO. The form must include each DBE used on the contract work and the work performed by each DBE. The form shall include the actual dollar amount paid to each DBE for the accepted creditable work on the contract. The form shall be certified under penalty of perjury, or other applicable law, to be accurate and complete. VDOT will use this certification and other information available to determine applicable DBE credit allowed to date by VDOT and the extent to which the DBEs were fully paid for that work. The Contractor shall acknowledge by the act of filing the form that the information is supplied to obtain payment regarding a federal participation contract. A letter of certification, signed by both the prime Contractor and appropriate DBEs, will accompany the form, indicating the amount, including any retainage, if present, that remains to be paid to the DBE(s).

L. Documentation Required for Final Payment

On those projects that are complete, the Contractor shall submit a final Form C-63 marked "Final" to the DCRO, within thirty (30) days of the final estimate. The form must include each DBE used on the contract and the work performed by each DBE. The form shall include the actual dollar amount paid to each DBE for the creditable work on the contract. VDOT will use this form and other information available to determine if the Contractor and DBEs have satisfied the DBE contract goal percentage specified in the contract and the extent to which credit was allowed. The Contractor shall acknowledge by the act of signing and filing the form that the information is supplied to obtain payment regarding a federal participation contract.

M. Prompt Payment Requirements

The Contractor shall make prompt and full payment to the subcontractor(s) of any retainage held by the prime Contractor after the subcontractor's work is satisfactorily completed.

For purposes of this Special Provision, a subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished, documented, and accepted as required by the contract documents by VDOT. When VDOT has made partial acceptance of a portion of the prime contract, the Department will consider the work of any subcontractor covered by that partial acceptance to be satisfactorily completed. Payment will

be made in accordance with the requirements of Section 107.01, Section 109.08, and Section 109.09 of the Specifications.

Upon VDOT's payment of the subcontractor's portion of the work as shown on the monthly progress estimate and the receipt of payment by the Contractor for such work, the Contractor shall make compensation in full to the subcontractor for that portion of the work satisfactorily completed and accepted by the Department. For the purposes of this Special Provision, payment of the subcontractor's portion of the work shall mean the Contractor has issued payment in full, less agreed upon retainage, if any, to the subcontractor for that portion of the subcontractor's work that VDOT paid to the Contractor on the monthly progress estimate.

The Contractor shall make payment of the subcontractor's portion of the work within seven (7) days of the receipt of payment from VDOT in accordance with the requirements of Section 107.01, Section 109.08, and Section 109.09 of the Specifications.

If the Contractor fails to make payment for the subcontractor's portion of the work within the time frame specified herein, the subcontractor shall contact the Responsible Engineer and the Contractor's bonding company in writing. The bonding company and VDOT will investigate the cause for non-payment and, barring mitigating circumstances that would make the subcontractor ineligible for payment, ensure payment in accordance with the requirements of Section 107.01, Section 109.08, and Section 109.09 of the Specifications.

By bidding on this contract, and by accepting and executing this contract, the Contractor agrees to assume these contractual obligations, and to bind the Contractor's subcontractors contractually to those prompt payment requirements.

Nothing contained herein shall preclude the Contractor from withholding payment to the subcontractor in accordance with the terms of the subcontract in order to protect the Contractor from loss or cost of damage due to a breach of agreement by the subcontractor.

N. Miscellaneous DBE Program Requirements

Loss of DBE Eligibility: When a DBE firm has been removed from eligibility as a certified DBE firm, the following actions will be taken:

1. When a Bidder/Contractor has made a commitment to use a DBE firm that is not currently certified, thereby making the Contractor ineligible to receive DBE participation credit for work performed, and a subcontract has not been executed, the ineligible DBE firm does not count toward either the contract goal or overall goal. The Contractor shall meet the contract goal with a DBE firm that is eligible to receive DBE credit for work performed, or must demonstrate to the Contract Engineer that it has made good faith efforts to do so.
2. When a Bidder/Contractor has executed a subcontract with a certified DBE firm prior to official notification of the DBE firm's loss of eligibility, the Contractor may continue to use the firm on the contract and shall continue to receive DBE credit toward its DBE goal for the subcontractor's work.
3. When VDOT has executed a prime contract with a DBE firm that is certified at the time of contract execution but that is later ruled ineligible, the portion of the ineligible firm's performance on the contract before VDOT has issued the notice of its ineligibility shall count toward the contract goal.

Termination of DBE: If a certified DBE subcontractor is terminated, or fails, refuses, or is unable to complete the work on the contract for any reason, the Contractor must promptly

request approval to substitute or replace that firm in accordance with this section of this Special Provision.

The Contractor, as aforementioned in **DBE Program-Related Certifications Made by Bidders/Contractors**, shall notify VDOT in writing before terminating and/or replacing the DBE that was committed as a condition of contract award or that is otherwise being used or represented to fulfill DBE contract obligations during the contract performance period. Written consent from the Department for terminating the performance of any DBE shall be granted only when the Contractor can demonstrate that the DBE is unable, unwilling, or ineligible to perform its obligations for which the Contractor sought credit toward the contract DBE goal. Such written consent by the Department to terminate any DBE shall concurrently constitute written consent to substitute or replace the terminated DBE with another DBE. Consent to terminate a DBE shall not be based on the Contractor's ability to negotiate a more advantageous contract with another subcontractor whether that subcontractor is, or is not, a certified DBE.

1. All Contractor requests to terminate, substitute, or replace a certified DBE shall be in writing, and shall include the following information:
 - (a) The date the Contractor determined the DBE to be unwilling, unable, or ineligible to perform.
 - (b) The projected date that the Contractor shall require a substitution or replacement DBE to commence work if consent is granted to the request.
 - (c) A brief statement of facts describing and citing specific actions or inaction by the DBE giving rise to the Contractor's assertion that the DBE is unwilling, unable, or ineligible to perform;
 - (d) A brief statement of the affected DBE's capacity and ability to perform the work as determined by the Contractor;
 - (e) A brief statement of facts regarding actions taken by the Contractor which are believed to constitute good faith efforts toward enabling the DBE to perform;
 - (f) The current percentage of work completed on each bid item by the DBE;
 - (g) The total dollar amount currently paid per bid item for work performed by the DBE;
 - (h) The total dollar amount per bid item remaining to be paid to the DBE for work completed, but for which the DBE has not received payment, and with which the Contractor has no dispute;
 - (i) The total dollar amount per bid item remaining to be paid to the DBE for work completed, but for which the DBE has not received payment, and over which the Contractor and/or the DBE have a dispute.
2. Contractor's Written Notice to DBE of Pending Request to Terminate and Substitute with another DBE.

The Contractor shall send a copy of the "request to terminate and substitute" letter to the affected committed DBE firm, in conjunction with submitting the request to the DCRO. The affected DBE firm may submit a response letter to the Department within two (2) business days of receiving the notice to terminate from the Contractor. The affected DBE firm shall explain its position concerning performance on the committed work. The

Department will consider both the Contractor's request and the DBE's response and explanation before approving the Contractor's termination and substitution request, or determining if any action should be taken against the Contractor.

If, after making its best efforts to deliver a copy of the "request to terminate and substitute" letter, the Contractor is unsuccessful in notifying the affected DBE firm, the Department will verify that the affected, committed DBE firm is unable or unwilling to continue the contract. The Department will immediately approve the Contractor's request for a substitution.

3. Proposed Substitution of Another Certified DBE

Upon termination of a DBE, the Contractor shall use reasonable good faith efforts to replace the terminated DBE. The termination of such DBE shall not relieve the Contractor of its obligations pursuant to this section, and the unpaid portion of the terminated DBE's contract will not be counted toward the contract goal.

When a DBE substitution is necessary, the Contractor shall submit an amended Form C-111 with the name of another DBE firm, the proposed work to be performed by that firm, and the dollar amount of the work to replace the unfulfilled portion of the work of the originally committed DBE firm. The Contractor shall furnish all pertinent information including the contract I.D. number, project number, bid item, item description, bid unit and bid quantity, unit price, and total price. In addition, the Contractor shall submit documentation for the requested substitute DBE as described in this section of this Special Provision.

Should the Contractor be unable to commit the remaining required dollar value to the substitute DBE, the Contractor shall provide written evidence of good faith efforts made to obtain the substitute value requirement. The Department will review the quality, thoroughness, and intensity of those efforts. Efforts that are viewed by VDOT as merely superficial or pro-forma will not be considered good faith efforts to meet the contract goal for DBE participation. The Contractor must document the steps taken that demonstrated its good faith efforts to obtain participation as set forth in the **Good Faith Efforts Described** section of this Special Provision.

Factors Used to determine if a DBE Trucking Firm is performing a CUF:

The following factors will be used to determine whether a DBE trucking company is performing a CUF:

1. To perform a CUF the DBE trucking firm shall be completely responsible for the management and supervision of the entire trucking operation for which the DBE is responsible by subcontract on a particular contract. There shall not be a contrived arrangement, including, but not limited to, any arrangement that would not customarily and legally exist under regular construction project subcontracting practices for the purpose of meeting the DBE contract goal;
2. The DBE must own and operate at least one fully licensed, insured, and operational truck used in the performance of the contract work. This does not include a supervisor's pickup truck or a similar vehicle that is not suitable for and customarily used in hauling the necessary materials or supplies;
3. The DBE receives full contract goal credit for the total reasonable amount the DBE is paid for the transportation services provided on the contract using trucks the DBE owns, insures, and operates using drivers that the DBE employs and manages;

4. The DBE may lease trucks from another certified DBE firm, including from an owner-operator who is certified as a DBE. The DBE firm that leases trucks from another DBE will receive credit for the total fair market value actually paid for transportation services the lessee DBE firm provides on the contract;
5. The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of the transportation services provided by non-DBE lessees, *not to exceed the value of transportation services provided by DBE-owned trucks on the contract*. For additional participation by non-DBE lessees, the DBE will only receive credit for the fee or commission it receives as a result of the lease arrangement.

EXAMPLE

DBE Firm X uses two (2) of its own trucks on a contract. The firm leases two (2) trucks from DBE Firm Y and six (6) trucks from non-DBE Firm Z.

		Value of Trans. Serv.
		(For Illustrative Purposes Only)
<u>Firm X</u>		
Truck 1	Owned by DBE	\$100 per day
Truck 2	Owned by DBE	\$100 per day
<u>Firm Y</u>		
Truck 1	Leased from DBE	\$110 per day
Truck 2	Leased from DBE	\$110 per day
<u>Firm Z</u>		
Truck 1	Leased from Non DBE	\$125 per day
Truck 2	Leased from Non DBE	\$125 per day
Truck 3	Leased from Non DBE	\$125 per day
Truck 4	Leased from Non DBE	\$125 per day
Truck 5	Leased from Non DBE*	\$125 per day
Truck 6	Leased from Non DBE*	\$125 per day

DBE credit would be awarded for the total transportation services provided by DBE Firm X and DBE Firm Y, and may also be awarded for the total value of transportation services by four (4) of the six (6) trucks provided by non-DBE Firm Z (not to exceed the value of transportation services provided by DBE-owned trucks).

Credit = 8 Trucks

Total Value of Transportation Services = \$820

In all, full DBE credit would be allowed for the participation of eight (8) trucks (twice the number of DBE trucks owned and leased) and the dollar value attributable to the Value of Transportation Services provided by the 8 trucks.

* With respect to the other two trucks provided by non-DBE Firm Z, DBE credit could be awarded only for the fees or commissions pertaining to those trucks that DBE Firm X receives as a result of the lease with non-DBE Firm Z.

6. For purposes of this section, the lease must indicate that the DBE firm leasing the truck has exclusive use of and control over the truck. This will not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, provided the lease gives the DBE absolute priority for and control over the use of the leased truck. Leased trucks must display the name and identification number of the DBE firm that has leased the truck at all times during the life of the lease.

Data Collection: In accordance with 49CFR Section 26.11, all firms bidding on prime contracts and bidding or quoting subcontracts on federal-aid projects shall provide the following information to the Contract Engineer annually.

- Firm name
- Firm address
- Firm's status as a DBE or non-DBE
- The age of the firm and
- The annual gross receipts of the firm

The means of transmittal and the risk for timely receipt of this information shall be the responsibility of the bidder. However, the above information can be submitted by means of the Annual Gross Receipts Survey as required in the Prequalification/Certification application.

All bidders, including DBE prime Contractor bidders, shall complete and submit to the Contract Engineer the Subcontractor/Supplier Solicitation and Utilization Form C-48 for each bid submitted; to be received within ten (10) business days after the bid opening. Failure of bidders to submit this form in the time frame specified may be cause for disqualification of the bidder and rejection of their bid in accordance with the requirements of this Special Provision, the contract specifications, and VDOT Road and Bridge specifications.

O. Suspect Evidence of Criminal Behavior

Failure of a bidder, Contractor, or subcontractor to comply with the Virginia Department of Transportation Road and Bridge Specifications and these Special Provisions wherein there appears to be evidence of criminal conduct shall be referred to the Attorney General for the Commonwealth of Virginia and/or the FHWA Inspector General for criminal investigation and, if warranted, prosecution.

Suspected DBE Fraud

In appropriate cases, VDOT will bring to the attention of the U. S. Department of Transportation (USDOT) any appearance of false, fraudulent, or dishonest conduct in connection with the DBE program, so that USDOT can take the steps, e.g., referral to the Department of Justice for criminal prosecution, referral to the USDOT Inspector General, action under suspension and debarment or Program Fraud and Civil Penalties rules provided in 49CFR Part 31.

P. Summary of Remedies for Non-Compliance with DBE Program Requirements

Failure of any bidder\Contractor to comply with the requirements of this Special Provision for Section 107.15 of the Virginia Road and Bridge Specifications, which is deemed to be a condition of bidding, or where a contract exists, is deemed to constitute a breach of contract shall be remedied in accordance with the following:

1. Disadvantaged Business Enterprise (DBE) Program Requirements

The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award, administration, and performance of this contract. Failure by the Contractor to carry out these requirements is a material breach of this contract, which will result in the termination of this contract or other such remedy, as VDOT deems appropriate.

All administrative remedies noted in this provision are automatic unless the Contractor exercises the right of appeal within the required timeframe(s) specified herein.

2. DBE Program-Related Certifications Made by Bidders\Contractors

Once awarded the contract, the Contractor shall comply fully with all regulatory and contractual requirements of the USDOT DBE Program, and that each certified DBE firm participating in the contract shall fully perform the designated work items with the DBE's own forces and equipment under the DBE's direct supervision, control, and management. Where a contract exists and where the Contractor, DBE firm, or any other firm retained by the Contractor has failed to comply with federal or VDOT DBE Program regulations and/or their requirements on that contract, VDOT has the authority and discretion to determine the extent to which the DBE contract requirements have not been met, and will assess against the Contractor any remedies available at law or provided in the contract in the event of such a contract breach.

3. Disqualification of Bidder

Bidders may be disqualified from bidding for failure to comply with the requirements of this Special Provision, the contract specifications, and VDOT Road and Bridge Specifications.

4. Bidding Procedures

The failure of a bidder to submit the required documentation within the timeframes specified in the **Contract Goal, Good Faith Efforts Specified** section of this Special Provision may be cause for rejection of that bidder's bid. If the lowest bidder is rejected for failure to submit required documentation in the specified time frames, the Department may either award the work to the next lowest bidder, or re-advertise and construct the work under contract or otherwise as determined by the Commonwealth.

In order to award a contract to a bidder that has failed to meet DBE contract goal requirements, VDOT will determine if the bidder's efforts were adequate good faith efforts, and if given all relevant circumstances, those efforts were to the extent a bidder actively and aggressively seeking to meet the requirements would make. Regardless of the DBE contract goal participation level proposed by the bidder or the extent of good faith efforts shown, all bidders shall timely and separately file their completed and executed Forms C-111, C-112, C-48, and Form C-49, as aforementioned, or face potential bid rejection. If a bidder does not submit its completed and executed C-111, or C-112, when required by this Special Provision, the bidder's bid will be considered non-responsive and may be rejected. If, after reconsideration, the Department determines the bidder has failed to meet the requirements of the contract goal and has failed to make adequate good faith efforts to achieve the level of DBE participation as specified in the bid proposal, the bidder's bid will be rejected. If sufficient documented evidence is presented to demonstrate that the apparent low bidder made reasonable good faith efforts, the Department will award the contract and reduce the DBE requirement to the

actual commitment identified by the lowest successful bidder at the time of its bid. The Contractor is encouraged to seek additional participation during the life of the contract.

If the Contractor fails to conform to the schedule of DBE participation as shown on the progress schedule, or at any point at which it is clearly evident that the remaining dollar value of allowable credit for performing work is insufficient to obtain the scheduled participation, the Contractor and any aforementioned affiliates may be enjoined from bidding for 60 days or until such time as conformance with the schedule of DBE participation is achieved. In such instances, the Contractor is expected to seek DBE participation towards meeting the goal during the prosecution of the contract.

If the Contractor fails upon completion of the project to meet the required participation, the Contractor and any prime contractual affiliates, as in the case of a joint venture, may be enjoined from bidding as a prime Contractor, or participating as a subcontractor on VDOT projects for a period of 90 days.

Prior to enjoinder from bidding or denial to participate as a subcontractor for failure to comply with participation requirements, as provided hereinbefore, the Contractor may submit documentation to the State Construction Engineer to substantiate that failure was due solely to quantitative underrun(s) or elimination of items subcontracted to DBEs, and that all feasible means have been used to obtain the required participation. The State Construction Engineer upon verification of such documentation shall make a determination whether or not the Contractor has met the requirements of the contract.

If it is determined that the aforementioned documentation is insufficient or the failure to meet required participation is due to other reasons, the Contractor may request an appearance before the Administrative Reconsideration Panel to establish that all feasible means were used to meet such participation requirements. The decision of the Administrative Reconsideration Panel shall be administratively final. The enjoinder period will begin upon the Contractor's failure to request a hearing within the designated time frame or upon the Administrative Reconsideration Panel's decision to enjoin, as applicable.

5. Verification of DBE Participation and Imposed Damages

If the Contractor fails to comply with correctly completing and submitting any of the required documentation requested by this provision within the specified time frames, the Department will withhold payment of the monthly progress estimate until such time as the required submissions are received by VDOT. Where such failures to provide required submittals or documentation are repeated the Department will move to enjoin the Contractor and any prime contractual affiliates, as in the case of a joint venture, from bidding as a prime Contractor, or participating as a subcontractor on VDOT projects until such submissions are received.

In addition to the remedies described heretofore in this provision VDOT also exercises its rights with respect to the following remedies:

Suspect Evidence of Criminal Behavior

Failure of a bidder, Contractor, or subcontractor to comply with the Virginia Department of Transportation Road and Bridge Specifications and these Special Provisions wherein there appears to be evidence of criminal conduct shall be referred to the Attorney General for the Commonwealth of Virginia and/or the FHWA Inspector General for criminal investigation and, if warranted prosecution.

In appropriate cases, VDOT will bring to the attention of the U. S. Department of Transportation (USDOT) any appearance of false, fraudulent, or dishonest conduct in connection with the DBE program, so that USDOT can take the steps, e.g., referral to the Department of Justice for criminal prosecution, referral to the USDOT Inspector General, action under suspension and debarment or Program Fraud and Civil Penalties rules provided in 49CFR Part 31.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE
EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals for female and minority participation, expressed in percentage terms of the Contractor's aggregate work force in each trade on all construction works in the covered area, are as follows:

Females- 6.9%

Minorities - See Attachment "A"

The goals are applicable to all the Contractor's construction work performed in the covered area, whether or not it is Federal or federally assisted. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications, set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established herein. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executives Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days the award of any construction subcontract in excess of \$10,000 at any tier for construction works under this contract. The notification shall list the name, address and telephone number of the subcontractor, employer identification number, estimated dollar amount of the subcontract, estimated starting and completion dates of the subcontract and the geographical area in which the contract is to be performed.

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)**

1. As, used in this provision:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941;
 - d. "Minority" includes:

- (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation.
 3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors and Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
 4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the coverer area. Covered construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
 5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
 6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
 7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

- a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, shall assign two or more women to each construction project. The Contractor shall specifically ensure that all foreman, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites in such facilities.
- b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off the street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union, or if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
- d. Provide immediate written notification to the Director when the union or unions which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or women sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper or annual report; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents and General Foremen prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including in any news media advertisement that the Contractor is "An Equal Opportunity Employer" for minority and female, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Directs its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by

recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures and tests to be used in the selection process.

- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of Contractor's workforce.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for such opportunities through appropriate training or other means.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are nonsegregated, except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. Goals for women have been established. However, the Contractor IS required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner, that is even though the Contractor has achieved its goals for women, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or nation origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director will proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate and make known to the Department a responsible official as the EEO Officer to monitor all employment related activity, to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors will not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

ATTACHMENT A

<u>Economic Area</u>	<u>Goal (Percent)</u>
Virginia:	
021 Roanoke-Lynchburg, VA	
SMSA Counties:	
4640 Lynchburg, VA	19.3
VA Amherst; VA Appomattox; VA Campbell; VA Lynchburg	
6800 Roanoke, VA	10.2
VA Botetourt; VA Craig; VA Roanoke; VA Roanoke City; VA Salem	
Non-SMSA Counties	12.0
VA Alleghany; VA Augusta; VA Bath; VA Bedford; VA Bland; VA Carroll;	
VA Floyd; VA Franklin; VA Giles; VA Grayson; VA Henry; VA Highland;	
VA Montgomery; VA Nelson; VA Patrick; VA Pittsylvania; VA Pulaski;	
VA Rockbridge; VA Rockingham; VA Wythe; VA Bedford City; VA Buena	
Vista:	
VA Clifton Forge; VA Covington; VA Danville; VA Galax; VA Harrisonburg;	
VA Lexington; VA Martinsville; VA Radford; VA Staunton; VA Waynesboro;	
WV Pendleton.	
022 Richmond, VA	
SMSA Counties:	
6140 Petersburg - Colonial Heights - Hopewell, VA	30.6
VA Dinwiddie; VA Prince George; VA Colonial Heights; VA Hopewell;	
VA Petersburg.	
6760 Richmond, VA	24.9

VA Charles City; VA Chesterfield; VA Goochland, VA Hanover; VA Henrico; VA New Kent; VA Powhatan; VA Richmond.	
Non-SMSA Counties	27.9
VA Albemarle; VA Amelia; VA Brunswick; VA Buckingham, VA Caroline; VA Charlotte; VA Cumberland; VA Essex; VA Fluvanna; VA Greene; VA Greensville; VA Halifax; VA King and Queen; VA King William; VA Lancaster; VA Louisa; VA Lunenburg; VA Madison; VA Mecklenburg; VA Northumberland; VA Nottoway; VA Orange; VA Prince Edward; VA Richmond VA Sussex; VA Charlottesville; VA Emporia; VA South Boston	
023 Norfolk - Virginia Beach - Newport News VA:	
SMSA Counties:	
5680 Newport News- Hampton, VA	27.1
VA Gloucester; VA James City; VA York; VA Hampton; VA Newport News; VA Williamsburg.	
5720 Norfolk - Virginia Beach - Portsmouth, VA - NC	26.6
NC Currituck; VA Chesapeake; VA Norfolk; VA Portsmouth; VA Suffolk; VA Virginia Beach.	
Non-SMSA Counties	29.7
NC Bertie; NC Camden; NC Chowan; NC Gates; NC Hertford; NC Pasquotank; NC Perquimans; VA Isle of Wight; VA Matthews; VA Middlesex; VA Southampton; VA Surry; VA Franklin.	
Washington, DC:	
020 Washington, DC.	
SMSA Counties:	
8840 Washington, DC - MD - VA	28.0
DC District of Columbia; MD Charles; MD Montgomery MD Prince Georges; VA Arlington; VA Fairfax; VA Loudoun; VA Prince William VA Alexandria; VA Fairfax City; VA Falls Church.	
Non- SMSA Counties	25.2
MD Calvert; MD Frederick; MD St. Marys; MD Washington; VA Clarke; VA Culpeper; VA Fauquier; VA Frederick; VA King George; VA Page; VA Rappahannock; VA Shenandoah; VA Spotsylvania; VA Stafford; VA Warren; VA Westmoreland; VA Fredericksburg; VA Winchester WV Berkeley; WV Grant; WV Hampshire; WV Hardy; WV Jefferson; WV Morgan.	
Tennessee:	
052 Johnson City - Kingsport - Bristol, TN - VA	
SMSA Counties:	
3630 Johnson City - Kingsport -Bristol, TN-VA	2.6
TN Carter; TN Hawkins; TN Sullivan; TN Washington; VA Scott: VA Washington; VA Bristol.	
Non-SMSA Counties	3.2
TN Greene; TN Johnson; VA Buchanan; VA Dickenson; VA Lee; VA Russell; VA Smyth; VA Tazewell; VA Wise; VA Norton; WV McDowell; WV Mercer.	
Maryland:	
019 Baltimore MD	
Non-SMSA Counties	23.6
MD Caroline; MD Dorchester; MD Kent; MD Queen Annes; MD Somerset; MD Talbot; MD Wicomico; MD Worchester; VA Accomack; VA Northampton.	

The following Form **FHWA-1273** titled **REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS** shall apply to this contract:

FHWA-1273 – Revised May 1, 2012

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

- A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

- 1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The

design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.
4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth

under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

- e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

- 4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

- 5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

- 6. **Training and Promotion:**

- a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.
 - b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).
 - c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
 - d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.
7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:
- a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.
 - b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
 - c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.
 - d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. **Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.
9. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.
- a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.
 - b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.
10. **Assurance Required by 49 CFR 26.13(b):**
- a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.
 - b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.
11. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.
- a. The records kept by the contractor shall document the following:
 - (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
 - (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
 - (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;
 - b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This

information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. Davis-Bacon and Related Act Provisions

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

- a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are

deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- b.
 - (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
 - (I) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (II) The classification is utilized in the area by the construction industry; and
 - (II) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
 - (2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
 - (3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

- (4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

- a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship

programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.
- (2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
 - (I) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
 - (II) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
 - (III) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

- (4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

- a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
6. **Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
7. **Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
8. **Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
9. **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
10. **Certification of eligibility.**
 - a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. **CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.
3. **Withholding for unpaid wages and liquidated damages.** The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.
4. **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).
 - a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:
 - (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
 - (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
 - (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.
 - b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.
- 2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
- 3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.
- 4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.
- 5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

- 1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.
- 2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards

(29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.
- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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2. **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
 - (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
 - (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local)

transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

- (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and
- (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred,

suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--
Lower Tier Participants:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
 - a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

U.S. DEPARTMENT OF LABOR
OFFICE OF THE SECRETARY
WASHINGTON
DECISION OF THE SECRETARY

This case is before the Department of Labor pursuant to a request for a wage predetermination as required by law applicable to the work described.

A study has been made of wage conditions in the locality and based on information available to the Department of Labor the wage rates and fringe payments listed are hereby determined by the Secretary of Labor as prevailing for the described classes for labor in accordance with applicable law.

This wage determination decision and any modifications thereof during the period prior to the stated expiration date shall be made a part of every contract for performance of the described work as provided by applicable law and regulations of the Secretary of Labor, and the wage rates and fringe payments contained in this decision, including modifications, shall be the minimums to be paid under any such contract and subcontractors on the work.

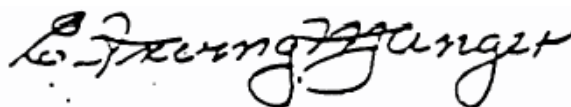
The contracting officer shall require that any class of laborers and mechanics which is not listed in the wage determination and which is to be employed under the contract, shall be classified or reclassified conformably to the wage determination, and a report of the action taken shall be sent by the Federal agency to the Secretary of Labor. In the event the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers and mechanics to be used, the question accompanied by the recommendation of the contracting officer shall be referred to the Secretary for determination.

Before using apprentices on the job the contractor shall present to the contracting officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U.S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U.S. Bureau of Apprenticeship and Training.

The contractor shall submit to the contracting officer written evidence of the established apprentice-journeyman ratios and wage in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

Fringe payments include medical and hospital care, compensation for injuries or illness resulting from occupational activity, unemployment benefits, life insurance, disability and sickness insurance, accident insurance (all designated as health and welfare), pensions, vacation and holiday pay, apprenticeship or other similar programs and other bona fide fringe benefits.

By direction of the Secretary of Labor

A handwritten signature in black ink, appearing to read "E. Irving Manger", with a stylized, cursive script.

E. Irving Manger, Associate Administrator
Division of Wage Determinations
Wage and Labor Standards Administration

General Decision Number: VA140129 01/24/2014 VA129

Superseded General Decision Number: VA20130140

State: Virginia

Construction Type: Highway

Counties: Chesapeake*, Isle of Wight, Norfolk*, Portsmouth*,
Suffolk* and Virginia Beach* Counties in Virginia.

*INDEPENDENT CITIES

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building
structures in rest area projects & railroad construction;
bascul, suspension & spandrel arch bridges designed for
commercial navigation, bridges involving marine construction;
and other major bridges).

Modification Number	Publication Date
0	01/03/2014
1	01/24/2014

SUVA2013-003 09/20/2013

	Rates	Fringes
ASBESTOS WORKER.....	\$ 12.85	
CARPENTER (STRUCTURE).....	\$ 17.06	
CEMENT MASON/CONCRETE FINISHER...	\$ 17.82	
ELECTRICIAN.....	\$ 24.40	
FORM SETTER.....	\$ 15.00	
IRONWORKER, REINFORCING.....	\$ 19.61	
IRONWORKER, STRUCTURAL.....	\$ 28.80	
LABORER		
Asphalt Raker.....	\$ 15.58	
Construction Laborer I		
(Skilled Laborer).....	\$ 15.57	
Construction Worker II		
(Laborer).....	\$ 12.48	
Fence Erector.....	\$ 15.18	
Flagger.....	\$ 9.00	
Grade Checker.....	\$ 14.50	
Guardrail Erector.....	\$ 23.00	
Landscape Worker.....	\$ 13.20	

Pipe Layer.....	\$ 14.83
Power Tool Operator.....	\$ 17.00
Sign Erector.....	\$ 11.50
MASON (STRUCTURE).....	\$ 12.50
PAINTER.....	\$ 21.67
PILEDRIVERMAN.....	\$ 13.25
PLUMBER.....	\$ 16.00
POWER EQUIPMENT OPERATOR:	
Air Compressor Operator.....	\$ 15.40
Asphalt Distributor.....	\$ 17.57
Asphalt Paver.....	\$ 18.52
Backhoe.....	\$ 18.59
Bulldozer (Utility).....	\$ 16.50
Bulldozer.....	\$ 16.85
Cocrete Paving Machine Operator.....	\$ 14.00
Concrete Finish Machine Operator.....	\$ 14.00
Concrete Finish Machine Screed Operator (Bridge)....	\$ 36.85
Concrete Saw Operator.....	\$ 16.01
Crane, Derrick, Dragline....	\$ 19.23

Drill Operator.....	\$ 15.00
Excavator (Gradall).....	\$ 17.54
Front End Loader.....	\$ 14.27
Hydro Seeder.....	\$ 11.00
Log Skidder Operator.....	\$ 15.00
Mechanic.....	\$ 18.00
Motor Grader (Fine Grade)...	\$ 16.72
Motor Grader (Rough Grade)...	\$ 18.40
Oiler, Greaser.....	\$ 14.00
Pavement Marking Operator...	\$ 14.00
Pavement Marking Truck Operator.....	\$ 23.75
Pavement Planing Groundman...	\$ 16.00
Pavement Planing Operator...	\$ 17.56
Pile Driver Leadsman.....	\$ 13.25
Pile Driver.....	\$ 15.65
Roller (Finish).....	\$ 16.57
Roller (Rough).....	\$ 16.91
Scraper Pan.....	\$ 11.85
Slurry Seal Paver Machine...	\$ 17.00
Stabilizer Operator.....	\$ 16.00
Stone-Spreader.....	\$ 15.80
Tractor Operator (Crawlers)...	\$ 12.37
Tractor Operator (Utility)...	\$ 16.15
Trenching Machine Operator...	\$ 14.38
Vacuum Machine Operator.....	\$ 13.25

SHEET METAL WORKER.....\$ 18.56

TRAFFIC SIGNALIZATION:

Traffic Signal Installation.....\$ 11.25

TRUCK DRIVER

Fuel & Lubricant Service

Truck Driver.....\$ 11.50

Truck Driver (Multi-Rear

Axle).....\$ 15.89

Truck Driver (Single Rear

Axle).....\$ 13.25

Truck Driver (Tandem Rear

Axle).....\$ 14.31

Truck Driver, Heavy Duty....\$ 16.13

WELDER.....\$ 14.00

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after

award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the

effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change

until a new survey is conducted.

END OF GENERAL DECISION.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
USE OF DOMESTIC MATERIAL

July 26, 2013

SECTION 102.05 PREPARATION OF BID of the Specifications is amended to include the following:

In accordance with the provisions of Section 635.410(b) of Title 23 CFR, hereinafter referred to as "Buy America", except as otherwise specified, all iron and steel products (including miscellaneous steel items such as fasteners, nuts, bolts and washers) to be permanently incorporated for use on federal aid projects shall be produced in the United States of America regardless of the percentage they exist in the manufactured product or final form they take. Therefore, "Domestically produced in the United States of America" means all manufacturing processes must occur in the United States of America, to mean, in one of the 50 States, the District of Columbia, Puerto Rico or in the territories and possessions of the United States. Manufacturing processes are defined as any process which alters or modifies the chemical content, physical size or shape or final finish of iron or steel material) such as rolling, extruding, bending, machining, fabrication, grinding, drilling, finishing, or coating whereby a raw material or a reduced iron ore material is changed, altered or transformed into a steel or iron item or product which, because of the process, is different from the original material. For the purposes of satisfying this requirement "coating" is defined as the application of epoxy, galvanizing, painting or any other such process that protects or enhances the value of the material. Materials used in the coating process need not be domestic materials.

For the purposes herein the manufacturing process is considered complete when the resultant product is ready for use as an item in the project (e.g. fencing, posts, girders, pipe, manhole covers, etc.) or is incorporated as a component of a more complex product by means of further manufacturing. Final assembly of a product may occur outside of the United States of America provided no further manufacturing process takes place.

Raw materials such as iron ore, pig iron, processed, pelletized and reduced iron ore, waste products (including scrap, that is, steel or iron no longer useful in its present form from old automobiles, machinery, pipe, railroad rail, or the like and steel trimmings from mills or product manufacturing) and other raw materials used in the production of steel and/or iron products may, however, be imported. Extracting, handling, or crushing the raw materials which are inherent to the transporting the materials for later use in the manufacturing process are exempt from Buy America. The use of foreign source steel or iron billet is not acceptable under the provisions of Buy America. For the purposes of this provision all steel or iron material not meeting the criteria as domestically produced in the United States of America will be considered as "foreign" material. All iron and steel items will be classified hereinafter as "domestic" or "foreign", identified by and subject to the provisions herein.

Domestically produced iron or steel ingots or billets shipped outside the United States of America for any manufacturing process and returned for permanent use in a project would not comply with "Buy America" requirements.

Buy America provisions do not apply to iron or steel products used temporarily in the construction of a project such as temporary sheet piling, temporary bridges, steel scaffolding, falsework or such temporary material or product or material that remains in place for the Contractor's convenience.

Section 635.410(b) of Title 23 CFR permits a minimal amount of steel or iron material to be incorporated in the permanent work on a federal-aid contract. The cost of such materials or products must not exceed one-tenth of one percent of the contract amount or \$2500, whichever is greater. The cost of the foreign iron or steel material is defined as its monetary value delivered to the job site

and supported by invoices or bill of sale to the Contractor. This delivered to site cost must include transportation, assembly, installation and testing.

In the event the total cost of all "foreign" iron and steel product or material does not exceed one-tenth of one percent of the total contract cost or \$2,500, whichever is greater, the use of such material meeting the limitations herein will not be restricted by the domestic requirements herein. However, by signing the bid, the Bidder certifies that such cost does not exceed the limits established herein.

Waivers:

With prior concurrence from Federal Highway Administration (FHWA) headquarters, the Federal Highway Division Administrator may grant a waiver to specific projects provided it can be demonstrated:

1. that the use of domestic steel or iron materials would be inconsistent with the public interest; or
2. materials or products requested for use are not produced in the United States in sufficient or reasonably available quantities and are of satisfactory quality for use in the permanent work.

The waiver request shall be submitted with supportive information to include:

1. Project number\description, project cost, waiver item, item cost, country of origin for the product, reason for the waiver, and
2. Analysis of redesign of the project using alternative or approved equal domestic products

In order to grant such a waiver the request for the waiver must be published in the Federal Register for a period not less than 15 days or greater than 60 days prior to waiving such requirement. An initial 15 day comment period to the waiver will be available to the public by means of the FHWA website: <http://www.fhwa.dot.gov/construction/contracts/waivers.cfm>. Following that initial 15 day period of review and comment the request for waiver will be published by the FHWA in the Federal Register. The effective date of the FHWA finding, either to approve or deny the waiver request, will be 15 days following publication in the Federal Register.

Only the FHWA Administrator may grant nationwide waivers which still are subject to the public rulemaking and review process.

Alternative Bidding Procedures:

An alternative bidding procedure may be employed to justify the use of foreign iron and/or steel. To qualify under this procedure the total project is bid using two alternatives, one based on the use of domestic products and the other, the use of corresponding foreign source steel and/or iron materials.

In accordance with the provisions of Section 103.02 the Contract will be awarded to the lowest responsive and responsible bidder who submits the lowest total bid based on furnishing domestic iron or steel unless such total exceeds the lowest total bid based on furnishing foreign iron and/or steel by more than 25 percent, in which case the award will be made to the lowest responsive and responsible bidder furnishing foreign iron and/or steel based upon furnishing verifiable supportive data. The bidder shall submit a bid based on permanently incorporating only domestic iron and/or steel in the construction of the project. The bidder may also submit a bid for the same proposed contract based on being allowed to permanently incorporate corresponding foreign iron and/or steel materials meeting the other contract requirements into the work on the contract. If he chooses to submit such a bid, that alternate bid shall clearly indicate which foreign iron and/or steel items will be permanently

installed in the work as well as contain prices for all other items listed in the corresponding domestic proposal to complete a total "Foreign" bid.

In the event the contract is awarded to the bidder furnishing foreign iron and/or steel materials or items the provision for price adjustment of steel items will be permitted, however, price fluctuations shall use the U.S. index as stated in the Special Provision for Price Adjustment For Steel. The Contractor must indicate which corresponding eligible steel items he chooses price adjustment to apply. In the event the contract is awarded to a bidder furnishing foreign iron and/or steel items and during the life of that contract the Contractor discovers he can not furnish foreign iron and/or steel material as originally anticipated and agreed upon, he shall be responsible to honor the total bid price and furnish such iron and/or steel materials meeting the contract requirements from other sources as necessary to complete the work.

In the event the Contractor proposes to furnish "foreign" iron and steel and can verify a savings in excess of 25 percent of the overall project cost if bid using domestic materials, the Contractor shall submit a second complete paper bid proposal clearly marked "Foreign" including Form C-7 and supportive data supplement on all sheets. Supportive data shall list, but not be limited to, origin of material, best price offer, quantity and complete description of material, mill analysis, evidence or certification of conformance to contract requirements, etc. The "Foreign" bid shall be completed using the best price offer for each corresponding bid item supplying foreign material in the alternative bid and submit the same with the Contractor's "Domestic" bid. The Contractor shall write the word "Foreign" by the bid total shown on Form C-7 as well as last page of Schedule of Items showing the total bid amount. The bidder shall also contact the State Contract Engineer to inform him that he is also submitting an alternate "Foreign" paper bid..

The information listed on the supportive data sheet(s) will be used to provide the basis for verification of the required cost savings. In the event comparison of the prices given, or corrected as provided in Section 103.01 of the Specifications, shows that use of "foreign" iron and steel items does not represent a cost savings exceeding the aforementioned 25 percent, "domestic" iron and/or steel and prices given there for shall be used and the "100 percent Domestic Items Total" shall be the Contractor's bid.

Certification of Compliance:

Where domestic material is supplied, prior to incorporation into the Work, the Contractor shall furnish to the Department a certificate of compliance (such as may be furnished by steel mill test reports) that all steel and/or iron products supplied to the project except as may be permitted (one-tenth of one percent of the total contract cost or \$2,500, whichever is greater) and permanently incorporated into the work satisfies the domestic requirements herein. This certification shall contain a definitive statement about the origin of all products covered under the provisions of Buy America as stated herein.

In lieu of the Contractor providing personal certification, the Contractor may furnish a stepped certification in which each handler of the product, such as supplier, fabricator, manufacturer, processor, etc. furnishes an individual certification that their step in the process was domestically performed.

USDOT 1050.2 APPENDIX A

During the performance of this contract, the consultant, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(1) **Compliance with Regulations:** The contractor shall comply with the Regulation relative to nondiscrimination in federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) **Solicitations for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

(4) **Information and Reports:** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Virginia Department of Transportation to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the Virginia Department of Transportation as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Virginia Department of Transportation shall impose such contract sanctions as it may determine to be appropriate, including, but not limited to:

- (a.) withholding of payments to the contractor under the contract until the contractor complies, and/or
- (b.) cancellation, termination or suspension of the contract, in whole or in part.

(6) **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontract, or procurement as the Virginia Department of Transportation may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Virginia Department of Transportation to enter into such litigation to protect the interests of the Virginia Department of Transportation, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

**VDOT
SPECIAL
PROVISIONS
FOR
CONSTRUCTION**

VDOT SUPPLEMENTAL SPECIFICATIONS (SSs), SPECIAL PROVISIONS (SPs) AND SPECIAL PROVISION COPIED NOTES (SPCNs)

Where Virginia Department of Transportation (VDOT) Supplemental Specifications, Special Provisions and Special Provision Copied Notes are used in this contract, the references therein to “the Specifications” shall refer to the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2007 for both imperial and metric unit projects. References to the “Road and Bridge Standard(s)” shall refer to the *Virginia Department of Transportation Road and Bridge Standards*, dated 2008 for both imperial and metric unit projects. References to the “Virginia Work Area Protection Manual” shall refer to the 2011 edition of the *Virginia Work Area Protection Manual* for imperial and metric unit projects. References to the “MUTCD” shall refer to the 2009 edition of the *MUTCD* and the current *Virginia Supplement to the MUTCD* for imperial and metric unit projects.

Where the terms “Department”, “Engineer” and “Contract Engineer” appear in VDOT Supplemental Specifications, Special Provisions and Special Provision Copied Notes used in this contract and the VDOT publication(s) that each references, the authority identified shall be in accordance with the definitions in Section 101.02 of the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2007. Authority identified otherwise for this particular project will be stated elsewhere in this contract.

VDOT Supplemental Specifications, Special Provisions and Special Provision Copied Notes used in this contract and the VDOT publication(s) that each reference are intended to be complementary to the each other. In case of a discrepancy, the order of priority stated in Section 105.12 of the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2007 shall apply.

VDOT Special Provision Copied Notes in this contract are designated with “(SPCN)” after the date of each document. VDOT Supplemental Specifications and Special Provision Copied Notes in this contract are designated as such above the title of each document.

The information enclosed in parenthesis “()” at the left of each VDOT Special Provision Copied Note in this contract is file reference information for VDOT use only. The information in the upper left corner above the title of each VDOT Supplemental Specification and VDOT Special Provision in this contract is file reference information for VDOT use only.

The system of measurement to be used in this project is stated elsewhere in this contract. VDOT Supplemental Specifications, Special Provisions and Special Provision Copied Notes containing imperial units of measure with accompanying expressions in metric units shall be referred to hereinafter as “dual unit measurement” documents. Such a “dual unit measurement” is typically expressed first in the imperial unit followed immediately to the right by the metric unit in parenthesis “()” or brackets “[]” where parenthesis is used in the sentence to convey other information. Where a “dual unit measurement” appears in VDOT documents, the unit that applies shall be in accordance with the system of measurement as stated elsewhere in this contract. The unit shown that is not of the declared unit of measurement is not to be considered interchangeable and mathematically convertible to the

declared unit and shall not be used as an alternate or conflicting measurement. Where VDOT Specifications are used for metric unit projects and only imperial units of measurement appear the document, the provision(s) in this contract for imperial unit to metric unit conversion shall apply.

12-1-11 (SPCN)

(c103i00-1213)

SECTION 103—AWARD AND EXECUTION OF CONTRACTS of the Specifications is amended as follows:

Section 103.09—Execution of Contract is amended to include the following:

According to Section 2.2-4308.2 of the *Code of Virginia*, any employer with more than an average of 50 employees for the previous 12 months entering into a contract in excess of \$50,000 with the Department to provide work or provide services pursuant to such contract shall register and participate in the U.S. Department of Homeland Security's "E-Verify" system to verify information and work authorization of its newly hired employees performing work pursuant to such contract.

Contractors are not required to be enrolled with "E-Verify" at the time bids are submitted, however, prior to award, the lowest responsive and responsible bidder must be enrolled with "E-Verify". Contractors may use the following website to enroll in "E-Verify", <http://www.uscis.gov/e-verify>.

Contractors shall expressly require any subcontractors performing work or providing services pursuant to the Contract to likewise utilize the U.S. Department of Homeland Security's "E-Verify" system to verify the employment eligibility of all new employees hired by the subcontractor during the Contract term.

Bidders or Contractors who fail to comply with the provisions of this section shall be debarred from contracting with any agency of the Commonwealth for a period up to one year. Such debarment shall cease upon registration and participation in the "E-Verify" program.

11-20-13 (SPCN)

The following provisions during construction are additional requirements on this VDOT Locally Administered Project and contractor shall conform and comply as follows:

1. Contractor shall have two Bulletin Boards with Federal-aid notice, Wage Rate Information, *Non-Discrimination Notice Form C60*, EEO poster at the job site (in job trailer, if applicable) and in contractor's office. Copies of these notices/posters are included in these provisions.
2. Certified Payrolls are due weekly by prime and subcontractors to City. City is required to submit payrolls to VDOT on a monthly basis with invoice, along with *Statement of Compliance Form C-28*. City will not pay contractor invoice until all required VDOT and Federal Forms have been completed accurately and approved by VDOT. Inability of contractor to complete and submit accurate VDOT and/or State forms will result in delayed or nonpayment of invoices. Payroll submission shall be from Contractor to City-assigned inspector. *Statement of Compliance Form C56* shall be included in Contractor submission. Copy of Form C-56 is included in these provisions.
3. *BASIC HOURLY RATES PAID BY CONTRACTOR Form C-28* must be submitted to City-assigned construction inspector within 60 days of the start of contract (prior to the approval of the second estimate) and then every 90 days thereafter. C-28 form includes prime and subcontractors employee hourly rates. Contractor representative and City-assigned inspector must sign C-28 before C-28 is submitted to VDOT. Contractor shall provide completed C-28 form to City assigned inspector for review/signature. Copy of Form C-28 is included in these provisions.
4. *Construction Directive Memorandum CD-2005-1* identifies procedures the City of Norfolk will implement during this contract regarding Guidelines for Labor Compliance on Davis Bacon/Federal-Aid Construction Projects.
5. *CONTRACTOR/SUBCONTRACTOR EQUAL EMPLOYMENT OPPORTUNITY INFORMATION REQUEST Form C64* must be completed, signed, and submitted to City-assigned construction inspector within 15 days of NTP and then every 180 days thereafter. Copy of Form C-64 is included in these provisions.
6. *CONTRACTOR'S PROGRESS SCHEDULE FOR CONSTRUCTION PROJECTS Form C-13* or City-approved equivalent progress schedule shall be completed and submitted monthly to City-assigned inspector prior to approval of pay invoice. Copy of Form C-13 is included in these provisions.
7. *Monthly EEO Report C57* shall be completed, signed, submitted by contractor to City-assigned inspector each month for the first three months of work and then submit each July for the duration of the project. Report C57 should be submitted to the city-assigned inspector by the prime contractor. The prime contractor should include in his/her Report C57 prime and subcontractor employment data. The prime should be requiring each subcontractor to provide him/her with the necessary information so that the prime can adequately complete the C57 report being submitted to the City. The staffing figures to

be reported under employment data must represent the project work force on board in whole or in part for the last payroll period preceding the end of the month. The staffing figures to be reported on C57 must include journey-level men and women, apprentices, and on the job trainees as indicated. Copy of Report C57 is included in these provisions.

8. Within 15 days of NTP, Contractor shall provide City-assigned inspector a Letter addressed to City stating name, title, address, and phone number of EEO Officer.
9. Within 15 days of NTP and every 6 months thereafter, Contractor shall provide City-assigned inspector EEO Meeting Minutes.
10. *Subletting Request Form C-31* shall be submitted on any Subletting under this contract. All creditable DBE participation must either be performed under an official subcontract executed between Prime and DBE or if 1st tier sub is utilizing DBEs, there be a three-party agreement executed between Prime, 1st tier sub, and DBE. (Exceptions: hauling only and supplier/vendors). Copy of C-31 is included in these provisions.
11. *Instructional and Informational Memorandum IIM-CD-2013-06.01* identifies procedures the City of Norfolk will implement during this contract regarding Approval of Sublet Requests.
12. *DBE AND SWAM PAYMENT COMPLIANCE REPORT C-63* shall be completed and submitted by Contractor to City-assigned inspector on a quarterly basis and in accordance with instructions identified on the report. On Federally funded project nearing completion, the Contractor shall submit Form C-63 marked Semi-Final within 20 days of the submission of the last regular estimate. This will be accompanied by a letter of certification, signed by the prime Contractor and appropriate DBE, indicating the amount, including any retainage, which remains to be paid. Within 30 days of the payment of the final estimate on Federal projects, the Contractor shall submit Form C-63 marked Final. The Final Form C-63 will be compared with the Semi-Final submission to ensure that prompt and proper payment has been made to the DBE-subcontractors, and to make certain that the Contractor has fully complied with the requirements of the Special Provision for Section 110.04 of the Specifications. Copy of Report C-63 is included in these provisions.
13. DBE Reviews may be conducted on DBE Firms throughout contract duration by VDOT Compliance Officer.
14. *Instructional and Informational Memorandum IIM-CD-2013-04.01* identifies procedures the City of Norfolk will implement during this contract regarding DBE Goals and SWAM Potential Achievements.
15. Contractor shall work diligently with City-assigned inspector to complete all VDOT-required forms. Signatures by both Contractor and City-assigned inspector are required on applicable VDOT-documentation prior to submitting to VDOT for review/approval of

monthly invoices. Contractor shall work directly with City-assigned inspector for completion of VDOT-required forms/reports.

16. Due to federal funding associated with this project, contractor must adhere to time of completion specified in contract documents. Liquidated damages will be strongly enforced.
17. City of Norfolk reimbursement by VDOT will not occur until all VDOT-required forms are completed accurately. Therefore, inability of contractor to provide adequate/accurate VDOT-required forms/paperwork will result in a delay of Contractor's payment.
18. Electronic copy of VDOT forms can be found at <http://vdotforms.vdot.virginia.gov/>
19. These VDOT SPECIAL PROVISIONS FOR CONSTRUCTION are in addition to any other special provisions within these contract documents.



U.S. Department
of Transportation
**Federal Highway
Administration**

NOTICE

The highway construction underway at this location is a Federal or Federal-aid project and is subject to applicable State and Federal laws, including Title 18, United States Code, Section 1020, which reads as follows:

“Whoever, being an officer, agent, or employer of the United States, or of any State or territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the costs thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction of any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report, or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to a material fact in any statement, certificate, or report submitted pursuant to the provisions of the Federal-Aid Road Act approved July 11, 1916 (39 Stat. 355), as amended and supplemented,

"Shall be fined under this title or imprisoned not more than five years, or both."

Any person having reason to believe this statute is being violated should report the same to the agency representative(s) named below.

(Federal-aid projects only)
State Highway Department

(Both Federal and Federal-aid projects)
**Federal Highway
Division Administrator**

(Both Federal and Federal-aid projects)
**Department of Transportation
Office of Inspector General
Toll free Hotline
1-800-424-9071**

EMPLOYEE RIGHTS UNDER THE DAVIS-BACON ACT

FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

PREVAILING WAGES

You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.

OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.

ENFORCEMENT

Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.

APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY

If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

or contact the U.S. Department of Labor's Wage and Hour Division.



For additional information:

1-866-4-USWAGE

(1-866-487-9243) TTY: 1-877-889-5627



WWW.WAGEHOUR.DOL.GOV

NOTICE!

NON-DISCRIMINATION

The highway construction underway at this location is a Federal-aid project and is subject to applicable State and Federal laws, including Executive Order 11,246, dated Sept. 24, 1965 which reads as follows:

"(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. Such action shall include, but not be limited, to the following: employment upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting for the provisions of this nondiscrimination clause.

"(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

"(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractors commitments under Section 202 of Executive Order No. 11246 of September 24, 1965 and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

"(4) The contractor will comply will all provisions of Executive Order 11246 of September 24, 1965 and of the rules, regulations and relevant orders of the Secretary of Labor.

"(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965,

and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

"(6) In the event of the contractor's noncompliance with the nondiscrimination clause of this contract or with any such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies involved as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

"(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: PROVIDED, HOWEVER, that in the event of the contractor becomes involved in, or is threatened with, litigation with a subcontract or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

ANY PERSON HAVING REASON TO BELIEVE THIS STATUE IS BEING VIOLATED SHOULD REPORT THE SAME TO BOTH THE VIRGINIA DEPARTMENT OF TRANSPORTATION AND THE FEDERAL HIGHWAY ADMINISTRATION.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DEPARTMENT OF EQUAL OPORTUNITY
MANAGER
EEO DIVISION
1401 East Broad Street
RICHMOND, VIRGINIA 23219

FEDERAL HIGHWAY ADMINISTRATION
U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL OFFICE BUILDING
4000 North 8th Street
RICHMOND, VIRGINIA

Equal Employment Opportunity is THE LAW

Employers Holding Federal Contracts or Subcontracts

Applicants to and employees of companies with a Federal government contract or subcontract are protected under the following Federal authorities:

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN

Executive Order 11246, as amended, prohibits job discrimination on the basis of race, color, religion, sex or national origin, and requires affirmative action to ensure equality of opportunity in all aspects of employment.

INDIVIDUALS WITH DISABILITIES

Section 503 of the Rehabilitation Act of 1973, as amended, prohibits job discrimination because of disability and requires affirmative action to employ and advance in employment qualified individuals with disabilities who, with reasonable accommodation, can perform the essential functions of a job.

VIETNAM ERA, SPECIAL DISABLED, RECENTLY SEPARATED, AND OTHER PROTECTED VETERANS

38 U.S.C. 4212 of the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, prohibits job discrimination and requires affirmative action to employ and advance in employment qualified Vietnam era veterans, qualified special disabled veterans, recently separated veterans, and other protected veterans.

Any person who believes a contractor has violated its nondiscrimination or affirmative action obligations under the authorities above should contact immediately:

The Office of Federal Contract Compliance Programs (OFCCP), Employment Standards Administration, U.S. Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20210 or call (202) 693-0101, or an OFCCP regional or district office, listed in most telephone directories under U.S. Government, Department of Labor.

Private Employment, State and Local Governments, Educational Institutions

Applicants to and employees of most private employers, state and local governments, educational institutions, employment agencies and labor organizations are protected under the following Federal laws:

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN

Title VII of the Civil Rights Act of 1964, as amended, prohibits discrimination in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment, on the basis of race, color, religion, sex or national origin.

DISABILITY

The Americans with Disabilities Act of 1990, as amended, protects qualified applicants and employees with disabilities from discrimination in hiring, promotion, discharge, pay, job training, fringe benefits, classification, referral, and other aspects of employment on the basis of disability. The law also requires that covered entities provide qualified applicants and employees with disabilities with reasonable accommodations that do not impose undue hardship.

AGE

The Age Discrimination in Employment Act of 1967, as amended, protects applicants and employees 40 years of age or older from discrimination on the basis of age in hiring, promotion, discharge, compensation, terms, conditions or privileges of employment.

SEX (WAGES)

In addition to sex discrimination prohibited by Title VII of the Civil Rights Act of 1964, as amended (see above), the Equal Pay Act of 1963, as amended, prohibits sex discrimination in payment of wages to women and men performing substantially equal work in the same establishment.

Retaliation against a person who files a charge of discrimination, participates in an investigation, or opposes an unlawful employment practice is prohibited by all of these Federal laws.

If you believe that you have been discriminated against under any of the above laws, you should contact immediately:

The U.S. Equal Employment Opportunity Commission (EEOC), 1801 L Street, N.W., Washington, D.C. 20507 or an EEOC field office by calling toll free (800) 669-4000. For individuals with hearing impairments, EEOC's toll free TDD number is (800) 669-6820.

Programs or Activities Receiving Federal Financial Assistance

RACE, COLOR, RELIGION, NATIONAL ORIGIN, SEX

In addition to the protection of Title VII of the Civil Rights Act of 1964, as amended, Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color or national origin in programs or activities receiving Federal financial assistance. Employment discrimination is covered by Title VI if the primary objective of the financial assistance is provision of employment, or where employment discrimination causes or may cause discrimination in providing services under such programs. Title IX of the Education Amendments of 1972 prohibits employment discrimination on the basis of sex in educational programs or activities which receive Federal assistance.

INDIVIDUALS WITH DISABILITIES

Sections 501, 504 and 505 of the Rehabilitation Act of 1973, as amended, prohibits employment discrimination on the basis of disability in any program or activity which receives Federal financial assistance in the federal government. Discrimination is prohibited in all aspects of employment against persons with disabilities who, with reasonable accommodation, can perform the essential functions of a job.

If you believe you have been discriminated against in a program of any institution which receives Federal assistance, you should contact immediately the Federal agency providing such assistance.

PERSONNEL REQUIREMENTS FOR WORK ZONE TRAFFIC CONTROL - Section 105 and 512 of the Specifications are amended as follows:

Section 105.14—Maintenance During Construction is amended to add the following:

The Contractor shall provide at least one person on the project site during all work operations who is currently verified either by the Department in Intermediate Work Zone Traffic Control, or by the American Traffic Safety Services Association (ATSSA) as a Traffic Control Supervisor (TCS). This person must have the verification card with them while on the project site. This person shall be responsible for the oversight of work zone traffic control within the project limits in compliance with the contract requirements involving the plans, specifications, the VWAPM, and the MUTCD. This person's duties shall include the supervision of the installation, adjustment (if necessary), inspection, maintenance and removal when no longer required of all traffic control devices on the project.

If none of the Contractor's on-site personnel responsible for the supervision of such work has the required verification with them or if they have an outdated verification card showing they are not currently verified either by the Department in Intermediate Work Zone Traffic Control, or by the American Traffic Safety Services Association (ATSSA) as a Traffic Control Supervisor (TCS) all work on the project will be suspended by the Engineer.

The Contractor shall provide at least one person on site who is, at a minimum, verified by the Department in Basic Work Zone Traffic Control for each construction and/or maintenance operation that involves installing, maintaining, or removing work zone traffic control devices. This person shall be responsible for the placement, maintenance and removal of work zone traffic control devices.

In the event none of the Contractor's on-site personnel of any construction/maintenance operation has, at a minimum, the required verification by the Department in Basic Work Zone Traffic Control, that construction/maintenance operation will be suspended by the Engineer until that operation is appropriately staffed in accordance with the requirements herein.

Section 512.03 Procedures is amended to add (r) **Work Zone Traffic Control** as the following:

- (r) **Work Zone Traffic Control:** The Contractor shall provide individuals trained in Work Zone Traffic Control in accordance with the requirements of Section 105.14 of the Specifications.

Section 512.04 Measurement and Payment is amended to add the following:

Basic Work Zone Traffic Control – Separate payment will not be made for providing a person to meet the requirements of Section 105.14 of the Specifications. The cost thereof shall be included in the price of other appropriate pay items.

Intermediate Work Zone Traffic Control - Separate payment will not be made for providing a person to meet the requirements of Section 105.14 of the Specifications. The cost thereof shall be included in the price of other appropriate pay items.

6-11-09a (SPCN)

(c105hf1-0309)

SECTION 105.06 SUBCONTRACTING of the Specifications is amended to include the following:

Any distribution of work shall be evidenced by a written binding agreement on file at the project site. Where no field office exists, such agreement shall be readily available upon request to Department inspector(s) assigned to the project.

The provisions contained in Form FHWA-1273 specifically, and other federal provisions included with the prime Contract are generally applicable to all Federal-aid construction projects and must be made a part of, and physically incorporated into all contracts, as well as, appropriate subcontracts for work so as to be binding in those agreements.

12-19-08 (SPCN)

U.S. DEPARTMENT OF
LABOR
Wage and Hour and Public
Contracts Division

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STATEMENT OF COMPLIANCE**

Form Approved
Budget Bureau No. 44-R1093

Date _____

I, _____ do hereby state:
(Name of signatory party) (Title)

(I) That I pay or supervise the payment of the persons employed by _____ on
(Contractor or subcontractor)

the _____ ; that during the payroll period commencing on the _____ day of _____
(Building or work)

20 _____ and ending the _____ day of _____, 20 _____, all persons employed on said project have been paid the full weekly
wages earned, that no rebates have been or will be made directly or indirectly to or on behalf of said _____
_____ from the full weekly wages earned by any person and that no deductions have been made
(Contractor or Subcontractor)

either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations,
Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act as amended (48 Stat. 948.63 Stat. 108, 72
Stat.967; 76 Stat. 357; 40 USC. 276c), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete: that the
wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage
determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the
work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with
a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if
no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States
Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

In addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll,
payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the
benefit of such employees, except as noted in Section 4(c) below.

or

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

Each Laborer or mechanic listed in the above referenced payroll has been paid as indicated on the payroll, an
amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits
as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION
Remarks	

Name and Title	Signature
The willful falsification of any of the above statements may subject the contractor or subcontractor to civil or criminal prosecution. See Section 1001 of Title 18 and Section 231 of Title 31 of the United States code.	

INSTRUCTIONS FOR PREPARATION OF STATEMENT OF COMPLIANCE

This statement of compliance meets needs resulting from the amendment of the Davis-Bacon Act to include fringe benefits provisions. Under this amended law, the contractor is required to pay fringe benefits as predetermined by the Department of Labor, in addition to payment to the minimum rates. The contractor's obligation to pay fringe benefits may be met by payment of the fringes to the various plans, funds, or programs or by making these payments to the employees as cash in lieu of fringes.

The contractor should show on the face of his payroll all monies paid to the employees whether as basic rates or as cash in lieu of fringes. The contractor shall represent in the statement of compliance that he is paying to others fringes required by the contract and not paid as cash in lieu of fringes. Detailed instructions follow:

Contractors who pay all required fringe benefits:

A contractor who pays fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage decision of the Secretary of Labor shall continue to show on the face of his payroll the basic cash hourly rate and overtime rate paid to his employees, just as he has always done. Such a contractor shall check paragraph 4(a) of the statement to indicate that he is also paying to approved plans, funds, or programs not less than the amount pre-determined as fringe benefits for each craft. Any exception shall be noted in Section 4(c).

Contractors who pay no fringe benefits:

A contractor who pays no fringe benefits shall pay to the employee and insert in the straight time hourly rate column of his payroll an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the applicable wage decision. Inasmuch as it is not necessary to pay time and a half on cash paid in lieu of fringes, the overtime rate shall not be less than the sum of the basic predetermined rate, plus the half time premium on the basic or regular rate plus the required cash in lieu of fringes at the straighttime rate. To simplify computation of overtime, it is suggested that the straight time basic rate and cash in lieu of fringes be separately stated in the hourly rate column, thus \$3.25/.40. In addition, the contractor shall check paragraph 4(b) of the statement to indicate that he is paying fringe benefits in cash directly to his employees. Any exceptions shall be noted in Section 4(c).

Use of Section 4(c), Exceptions

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination requires is obliged to pay the deficiency directly to the employees as cash in lieu of fringes. Any exceptions to Section 4(a) or 4(b), whichever the contractor may check, shall be entered in Section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid the employees as cash in lieu of fringes, and the hourly amount paid to plans, funds or programs as fringes.

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
BASIC HOURLY RATES PAID BY CONTRACTOR**

Contractor: _____ Vendor No.: _____
 Project No.: EN00-122-138, C506, (UPC 97727) CONTID. No.: _____
 FHWA No.: 534 DATA# (4J028) County/City of _____
 Decision No.: _____
 Report Period Ending Date: _____

List number of employees in each classification and basic hourly wage rates paid. DO NOT INCLUDE FRINGE BENEFITS. Do not show overtime rates. Include employees of all sub contractors.

23-26	(Computer Code)	27-28	30-33	34-36	37-40	41-43	44-47	48-50	51-54	55-57	58-61
0110	Asbestos Worker	@			@		@		@		@
0100	Asphalt Raker	@			@		@		@		@
2400	Blaster	@			@		@		@		@
0200	Carpenter, Structure	@			@		@		@		@
0300	Carpenter, Structure Helper	@			@		@		@		@
0400	Concrete Finisher	@			@		@		@		@
0500	Concrete, Finisher Helper	@			@		@		@		@
1510	Construction Worker I (Skilled Laborer)	@			@		@		@		@
1500	Construction Worker II (Laborer)	@			@		@		@		@
0550	Deckhand	@			@		@		@		@
0600	Electrician	@			@		@		@		@
0625	Electrician Helper	@			@		@		@		@
0800	Flaggers	@			@		@		@		@
1000	Fence Erector	@			@		@		@		@
0900	Form Setter	@			@		@		@		@
7200	Grade Checker	@			@		@		@		@
1010	Guardrail Erector	@			@		@		@		@
1600	Landscape Worker	@			@		@		@		@
1700	Mason, Structure	@			@		@		@		@
1800	Mechanic	@			@		@		@		@
4500	Oiler, Greaser	@			@		@		@		@

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
BASIC HOURLY RATES PAID BY CONTRACTOR**

Project No.: _____ Contractor: _____

23-26	(Computer Code)	27-28	30-33	34-36	37-40	41-43	44-47	48-50	51-54	55-57	58-61
2000	Painter	@			@		@		@		@
2100	Painter, Helper	@			@		@		@		@
2200	Pile Driver, Leadsman	@			@		@		@		@
2300	Pipe Layer	@			@		@		@		@
2310	Plumber	@			@		@		@		@
2320	Plumber, Helper	@			@		@		@		@
1100	Reinforcing Metal Worker	@			@		@		@		@
1200	Reinforcing Metal Worker Helper	@			@		@		@		@
2550	Sheet Metal Worker	@			@		@		@		@
2500	Sign Erector	@			@		@		@		@
1300	Structural Worker	@			@		@		@		@
1400	Structural Worker Helper	@			@		@		@		@
8000	Traffic Signal Installer/ Maintenance	@			@		@		@		@
8010	Traffic Signal Installer/ Maintenance Helper	@			@		@		@		@
0425	Waterproofer	@			@		@		@		@
6600	Welder	@			@		@		@		@
6610	Welder, Certified	@			@		@		@		@
2700	Air Compressor Operator	@			@		@		@		@
2800	Asphalt Distributor Operator	@			@		@		@		@
2900	Asphalt Paver Operator	@			@		@		@		@
3000	Backhoe Operator	@			@		@		@		@
3100	Bulldozer Operator	@			@		@		@		@
3200	Bulldozer Operator (Utility)	@			@		@		@		@
3300	Concrete Finish Machine Screed Operator (Bridge)	@			@		@		@		@
3500	Concrete Paving Machine Operator	@			@		@		@		@

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
BASIC HOURLY RATES PAID BY CONTRACTOR**

Project No.: _____ Contractor: _____

23-26	(Computer Code)	27-28	30-33	34-36	37-40	41-43	44-47	48-50	51-54	55-57	58-61
3400	Concrete Finish Machine Operator	@			@		@		@		@
3550	Concrete Pump Operator	@			@		@		@		@
6700	Concrete Saw Operator	@			@		@		@		@
3600	Crane, Derrick, Dragline Operator (1-cm & under)	@			@		@		@		@
3700	Crane, Derrick, Dragline Operator (over 1-cm)	@			@		@		@		@
3800	Crusher tender Operator	@			@		@		@		@
3900	Drill Operator	@			@		@		@		@
6800	Excavator Operator (Gradall Operator)	@			@		@		@		@
4100	Front End Loader Operator (2-cm & under)	@			@		@		@		@
4200	Front End Loader Operator (over 2-cm)	@			@		@		@		@
4210	Fuel & Lubricant Service Truck Driver	@			@		@		@		@
6900	Hydro-Seeder Operator	@			@		@		@		@
6910	Log Skidder Operator	@			@		@		@		@
6920	Mobile Mixer Operator	@			@		@		@		@
4300	Motor Grader Operator (Fine Grade)	@			@		@		@		@
4400	Motor Grader Operator (Rough Grade)	@			@		@		@		@
4050	Pavement Marking Truck Operator	@			@		@		@		@
4060	Pavement Marking Operator	@			@		@		@		@
2910	Pavement Planing Groundman	@			@		@		@		@
2905	Pavement Planing Operator	@			@		@		@		@
4600	Pile Driver Operator	@			@		@		@		@
4610	Pipe Boring /Jacking Machine Operator	@			@		@		@		@
4620	Boom /Auger Operator	@			@		@		@		@

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
BASIC HOURLY RATES PAID BY CONTRACTOR**

Project No.: _____ Contractor: _____

23-26	(Computer Code)	27-28	30-33	34-36	37-40	41-43	44-47	48-50	51-54	55-57	58-61
4700	Plant Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
4800	Power Tool Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
4900	Roller Operator (Rough)	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5000	Roller Operator (Finish)	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5100	Scraper Pan Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5110	Shot Blast Machine Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5200	Shovel Operator (2-yd & under)	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5300	Shovel Operator (over 2-yd)	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5325	Slip-Form Paver Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5350	Slurry Seal Paver Machine Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5375	Slurry Seal Paver Truck Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5400	Stabilizer Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5500	Stone-Spreader Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5600	Subgrade Machine Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5700	Tractor Operator (Crawlers)	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
5900	Transit Mix Truck Driver	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
6000	Trenching Machine Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
6100	Truck Driver Heavy Duty (over 7 c.y.)	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
6200	Truck Driver Heavy duty (7 c.y. & under)	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
6300	Truck Driver (Multi-Rear Axle)	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
6310	Truck Driver (Tandem Rear Axle)	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
6400	Truck driver (Single rear Axle)	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____
6410	Vacuum Machine Operator	_____ @ _____	_____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____	_____	_____ @ _____

I certify that the above information is correct and corresponds with payroll records for this project for the period

Signed: _____
(Contractor Representative Signature)

Date _____

This report is to be submitted every 90 days covering all employees working during that period.

For Departmental Use Only

Number and Rates Reviewed by: _____
(Name)

(Title)

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION DIRECTIVE MEMORANDUM**

GENERAL SUBJECT:	<u>Federal Labor Compliance</u>	NUMBER:	<u>CD-2005-1</u>
		DATE:	<u>March 8, 2005</u>
SPECIFIC SUBJECT:	<u>Authority of the Department's Labor Compliance Administrator</u>	SUPERSEDES:	<u>Supersedes CD-98-1</u>
		SUNSET/ EXPIRES:	<u>March 8, 2010</u>

AMANDA VALLEJO
CIVIL RIGHTS DIVISION ADMINISTRATOR

**Original with signature(s) on file in the office
of the Scheduling and Contract Division**
W. BYRON COBURN, JR., P.E.
SCHEDULING & CONTRACT ENGINEER

PURPOSE: The purpose of this CD is to clarify the responsibility and authority of the Department's Project Inspectors, Designated Project Managers and Construction Managers, District Liaison Labor Representative, Labor Compliance Administrator, Contract Engineer, and Scheduling and Contract Engineer.

DIRECTED TO - DISTRICT ADMINISTRATORS

GUIDELINES FOR LABOR COMPLIANCE ON DAVIS BACON /FEDERAL-AID CONSTRUCTION PROJECTS

Compliance with Federal labor requirements is a condition of participation in Federal-aid highway projects pursuant to 23 U.S.C. Section 114. It is a requirement of all highway contracts that Federal and State labor regulations are observed throughout the prosecution of the work.

Labor Compliance is a contract administration issue, which is administered by the Civil Rights Division with assistance from the Scheduling and Contract Division.

In very general terms, the duties of those responsible for the enforcement of the aforementioned requirements are as follows:

- A. Inspectors - The [Project](#) Inspectors are the Department's on-site Field Labor Compliance Officers, and should have a good working knowledge of Federal and State Labor regulations applicable to Labor Compliance responsibilities of the Department. The [Project](#) Inspector has the responsibility and authority to make routine checks of Contractor's and subcontractors' payrolls for accuracy and completeness with regard to names and addresses of employees, job classification, wage rates, hours worked, gross earnings, itemized deductions, and net weekly wages paid. All approved subcontractors payrolls must be forwarded through the Prime Contractor to the Project Inspector and must bear certification that the Prime Contractor has reviewed them.

Project Inspectors have the responsibility and authority to conduct, at random, on-site interviews with Contractors' employees to:

- Determine the accuracy of records;
- Aid in substantiating or assessing alleged violations and give employees the opportunity to point out other violations;
- Examine the validity of claimed exemptions;
- Determine whether the employee is properly classified in the work he / she is doing;
- Assure the required posters and wage rates are posted as required in the Specifications;
- Assure the Contractor and subcontractors submit the required Weekly Statement of Compliance, Form C-56 (WH-348) on Federal-aid projects with the payroll. This affidavit relates to Anti-Kickback regulations, the Davis-Bacon Act, Work Hours Act and Fringe Benefits, and is required throughout the course of the work; and
- [Record the results of the employee interviews in the project diary.](#)

These interviews should be performed at random. The first interviews should be performed within the first 30 days after the Contractor has fully mobilized. Subsequent interviews should be performed no less than semi-annually and when new work crews are assigned to the project.

- B. Designated Project Manager and Construction Manager - Responsible for assuring that applicable specifications, provisions, and associated policies, procedures, and guidelines are enforced.
- C. District Liaison Labor Representative (District Civil Rights Manager) - Provides technical interpretations and guidance to the Residency, reviews submittals for accuracy and completeness, prepares and submits required and/or requested reports, i.e., Forms C-28, C-51, certified payrolls as requested, and Semi-Annual Labor Reports FHWA 1494. The District Liaison Labor representative will conduct investigations involving employee complaints, i.e., certified payrolls, predetermined wages, overtime, fringe benefits, classifications, and Copeland Anti Kickback violations. [The District Liaison Labor Representative will also](#) assist the Labor Compliance Administrator in labor compliance reviews, investigations, and oversight authority on district labor violations.
- D. Labor Compliance Administrator (Civil Rights Division Administrator) - The Administrator shall rule on all disputes, that may arise as to the proper interpretation of federal labor compliance regulations, policies, and guidelines. The Administrator may make, at their discretion, random field labor compliance reviews and investigations on the Department's construction projects. They shall also reserve the authority to review and obtain copies of any and all District's records and/or documentation pertaining to Labor Compliance inclusive of, but not limited to, letters, forms, employee field reviews, reports, and labor investigative reports. The Administrator will have oversight authority on district labor investigations involving labor violations that may result in administrative or criminal sanctions. The Administrator may conduct additional investigations with the assistance of district personnel if needed. These types of investigations will be discussed with the Contract Engineer and the Scheduling and Contract Engineer who will work with the Civil Rights Division Administrator to determine administrative actions [where warranted](#). Investigations that may result in criminal action will be forwarded under the direction of the Scheduling and Contract Engineer to the appropriate authorities (i.e., the Federal Highway Administration, the Department of Labor, or the Attorney General's office, as appropriate).

While these descriptions are certainly not all inclusive, they serve to reiterate the authority and responsibilities of those involved in labor compliance activities.

Individuals listed below are the persons authorized to handle all inquiries in reference to labor compliance:

Labor Compliance Administrator - Civil Rights Division Administrator
District Liaison Labor Representative - District Civil Rights Manager

DL: wskjr

CC: Mr. Philip A. Shucet
Mr. Donald R. Askew, P.E.
Commissioners Staff
Division Administrators
District Construction Engineers
District Maintenance Engineers
District Civil Rights Managers
District Contract Managers
Residency Administrators
Assistant Resident Engineers
Construction Managers
Project Inspectors
Federal Highway Administration
American Concrete Pavement Association
Virginia Ready-Mixed Concrete Association
Precast Concrete Association of Virginia
Virginia Department of Minority Business Enterprise
Virginia Transportation Construction Alliance
Old Dominion Highway Contractors Association
Virginia Asphalt Association

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
CONTRACTOR/SUBCONTRACTOR
EQUAL EMPLOYMENT OPPORTUNITY
INFORMATION REQUEST

This report is developed to reflect the Total Employment of each Contracting firm performing Highway Construction Work in Virginia. It is to be used as a tool in evaluating the Contractor's posture to ensure equal employment opportunity. The requested information is to be submitted to the Responsible Charge Engineer prior to releasing the project for construction and is required of each subcontractor as part of the subletting request.

NAME OF COMPANY _____ CONTRACTOR _____

ADDRESS _____

SUBCONTRACTOR _____

FIRMS EEO OFFICER _____

Official TitleTOTAL COMPANY EMPLOYMENT AS OF _____ (updated report required each 6 months)
MONTH YEAR

EMPLOYMENT DATA

Report all permanent, temporary or part-time employees. Enter the appropriate figures on all lines and in all columns. Include apprentices and on-the-job trainees in appropriate job category totals.

Job Categories	All Employees			Minority Group Employees									
	Total (Col. 2+3)	Male	Female	Male					Female				
				Black American	Asian/ Indian American	Asian/ Pacific American	Native American	Hispanic American	Black American	Asian / Indian American	Asian/ Pacific American	Native American	Hispanic American
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Officials & Managers													
Professionals (Engr. Etc.)													
Supervisors													
Foremen													
Clerical													
Equipment Operators													
Mechanics													
Truck Drivers													
Ironworkers													
Carpenters													
Cement Masons													
Electricians													
Pipefitters, Plumbers													
Painters													
Laborers (Unskilled)													
Other													
Total													

(Include all company employees enrolled in formal on-the-job training programs)

ON THE JOB TRAINEES	Operators												
	Craftsmen												

I certify that the employment data shown above represents the ethnic composition of the firm's employment.

Prepared by _____
Signature Title Date

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

CONTRACTOR'S PROGRESS SCHEDULE FOR CONSTRUCTION PROJECTS

CONTRACT ID. NO.: _____ PROJECT NO.: _____

ROUTE: _____ COUNTY: _____

MAJOR COMPONENTS OF WORK								
	CLEARING & GRUBBING	GRADING	SELECT MATERIAL & SUBBASE	BASE	SURFACE	CULVERTS & BRIDGES	MISC. ITEMS	
CONTRACT TIME	% PROGRESS	% PROGRESS	% PROGRESS	% PROGRESS	% PROGRESS	% PROGRESS	% PROGRESS	% TOTAL PROGRESS
*DOLLAR VALUE BY COMPONENT								

TOTAL CONTRACT TIME _____ *TOTAL CONTRACT VALUE _____

*ROUND TO NEAREST DOLLAR
(SEE PAGE 2 FOR FILING INSTRUCTIONS)

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

APPROVED BY: _____
TITLE: _____
DATE: _____

CONTRACTOR: _____
BY: _____
DATE: _____

FILING INSTRUCTIONS

THE COMPLETED SCHEDULE MUST BE APPROVED BY VDOT PRIOR TO PAYMENT OF THE FIRST ESTIMATE, NO CONSIDERATION IS TO BE GIVEN FOR ANTICIPATED SHUTDOWN TIME IN THE PREPARATION OF THE SCHEDULE.

This schedule shall define the contract work by major components and indicate the anticipated progress in percentages for each time period using accumulative totals, based on the dollar value of work to be performed on each. The Contractor shall submit, with the schedule, an itemized breakdown, showing the various contract items and costs that have been included under each component. When an item is distributed under more than one component, the itemized breakdown is to list the item and the proportionate cost for each component.

Column 1 **Contract Time:** For a fixed date project, show the name of each month within the contract time limit. The first month is to be from the date by which the Contractor is to proceed with construction until the first monthly estimate date and the name of the month is to correspond with the estimate month. The last month is to be from the last monthly estimate date to the Time Limit date and the name of the month is to be the Time Limit date.

E X A M P L E:

Contractor-Austin Construction Co.
Time Limit-September 1, 1999
Notified to Proceed on-April 15, 1996
First Month-May, 1996 (4-15-96 thru 5-4-96)
Last Month-September 1, 1999 (8-5-99 thru 9-1-99)

For Calendar Day projects, show the number of calendar days within the contract time limit in 30-day increments. (Example: 110 day Time Limit-30, 60, 90, 110)

Column 2	Clearing and Grubbing: This component includes clearing and grubbing and demolition items.
Column 3	Grading: This component includes regular excavation, borrow excavation, pipe, box culverts, except those having "B" designations, retaining walls, drop inlets and other minor drainage structures.
Column 4	Select Material and Subbase: This component includes select material and all subbase, including soil cement if it is being placed as a subbase.
Column 5	Base: This component includes all types of base courses, including portland cement concrete pavement base when a bituminous concrete pavement is placed on top for the riding surface.
Column 6	Surface: This component includes all types of surfaces that will form the finish surface for travel.
Column 7	Culverts and Bridges: This component includes all bridge structures and box culverts having "B" designations.
Column 8	Miscellaneous Items: This includes all items in the contract not listed in Columns 2 through 7.
Column 9	% Total Progress: Show the total percent of contract anticipated to be completed for each time period, using accumulative totals.

At the bottom of the columns, show the nearest dollar, the total value of each component and the contract value. The sum of the values of the various components is to equal the total contract value, subject to allowance for rounding components to nearest dollar.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY CONSTRUCTION CONTRACTORS
MONTHLY EEO REPORT

Project No. EN00-122-138, C506, (UPC 97727)

REPORT for the MONTH & YEAR of _____

Contract ID No. _____

MONTHLY EEO REPORT

1. MARK APPROPRIATE BLOCK a Contractor	2. COMPANY NAME, CITY, STATE:	3. FED PROJECT No.:	4. DOLLAR AMOUNT OF CONTRACT:	5. TYPE OF CONSTRUCTION
a Subcontractor				
6. COUNTY AND STATE	7. PERCENT COMPLETE	8. BEGINNING CONSTRUCTION DATE	9. ESTIMATED PEAK EMPLOYMENT MONTH & YEAR (a)	NO. OF EMPLOYEES (b)

10. EMPLOYMENT DATA

JOB CATEGORIES	TOTAL EMPLOYED		TOTAL RACIAL/ETHNIC MINORITY		BLACK or AFRICAN		HISPANIC OR LATINO		AMERICAN INDIAN OR ALASKA		ASIAN		NATIVE HAWAIIAN OR OTHER		TWO OR MORE RACES		WHITE		APPRENTICES		ON THE JOB TRAINEES	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
OFFICIALS																						
SUPERVISORS																						
FOREMEN/WOMEN																						
CLERICAL																						
MECHANICS																						
TRUCK DRIVERS																						
IRONWORKERS																						
CARPENTERS																						
CEMENT MASONS																						
ELECTRICIANS																						
PIPEFITTER/PLUMBERS																						
PAINTERS																						
LABORERS-SEMI SKILLED																						
LABORERS-UNSKILLED																						
TOTAL																						

TABLE C (Table B data by racial status)

APPRENTICES	OUT TRAINEES	8. PREPARED BY: (Signature and Title of Contractors Representative)	9. DATE	

(Continued)

Contract Id. No. _____ Sublet No. _____
Dept. Use Only Dept. Use Only

Proposed Subcontractor

This is to certify that as an authorized representative of the below listed subcontractor, I have reviewed, understand, and agree to comply with the stipulations in the "Required Contract Provisions Federal-Aid Construction Contracts". (If contained in the contract for the above listed project)

Name of Subcontractor

Address

City, State and Zip

By: _____
Signature(Officer of Subcontractor) Title

Phone No.

Date

Prime Contractor

As an authorized representative of the prime contractor, I certify that this sublet meets and is in accordance with the requirements of the contract for the above project between the undersigned contractor and the Commonwealth of Virginia/Virginia Department of Transportation. I certify that the actual subcontract agreement for which this sublet approval request is made contains the stipulations in the "Required Contract Provisions Federal-Aid Construction Contracts". (If contained in the contract for the above listed project)

Name of Prime Contractor

Address

City, State and Zip

By: _____
Signature(Officer of Prime Contractor) Title

\$ Actual Amount of Subcontract

Phone No.

Date

VDOT Approval of Contractor's Subletting Request

RECOMMENDED FOR APPROVAL APPROVED

District Administrator (or Designee) Date

District Administrator (or Designee) Date

Sublets under \$25,000 _____

Sublets to Date _____

Percent Sublet _____

Original - District File

The original of this form is to be submitted to the Department's Responsible Charge Engineer for the Contract (or their Designee)

VIRGINIA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DIVISION (CD)

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM (IIM)

GENERAL SUBJECT: SUBCONTRACTING	NUMBER: IIM-CD-2013-06.01
SPECIFIC SUBJECT: APPROVAL OF SUBLET REQUESTS	DATE: August 1, 2013
	SUPERCEDES: CD-2008-12
APPROVED: <div style="text-align: center;">Signature On File ----- Mark E. Cacamis, P.E., CCM State Construction Engineer</div> DATE: <u>August 1, 2013</u>	

DIRECTED TO - DISTRICT ADMINISTRATORS

The authority to approve sublet requests on contracts which incorporate the Road and Bridge Specifications is delegated to the District Administrator or their designee(s). The primary contract specification concerning subcontracting is the Road & Bridge section titled Subcontracting.

Unless otherwise permitted in the contract, all sublet requests require the written consent of the District Administrator or his designee. The Form C-31 "Subletting Request" is to be used by the Prime Contractor to request approval of proposed subcontractors, and by the Department to evaluate the request and grant approval, if appropriate.

The District Administrator may delegate in writing the authority to approve sublet requests to the designees they deem appropriate. The review and approval process can be done either by a single person or by multiple persons.

Single Person – The designee is responsible for all of the review steps necessary to ensure the sublet request is complete and ready to approve and then to also approve the sublet request. No recommendation for approval signature would be necessary on the C-31.

Multiple Persons – One designee is responsible for either some or all of the review steps necessary to ensure the sublet request is complete and ready to approve and then to sign the C-31 recommending approval of the sublet. Another designee is responsible for any additional review necessary and for actually approving the sublet request.

The designee(s) should verify that the C-31 is complete and that the following information is verified prior to approval of the sublet request:

1. Contractor's name and vendor number
2. Subcontractor's name and vendor number
3. Other information at the top of page one of the C-31
4. Items, item codes, and unit prices
5. Extensions and total amount
6. Request has original signature of company officer (Both Prime Contractor and Proposed Subcontractor). If transmitted by fax or electronically to the Department, a sublet request can be approved so long as the original with original signatures is subsequently received and kept in the Department's files.
7. Evidence of insurance in accordance with Section 103.06(f) of the Specifications
8. Cumulative percentage of all sublets is within contract requirements
9. Subcontractor is currently either prequalified or registered with the State Corporation Commission (SCC), as appropriate. If a subcontractor is currently shown on the Construction Division's on line prequalified list, it is not necessary to check on their SCC registration or standing. If prequalification is not required on the item(s) to be sublet (and the firm is also not currently prequalified), then the firm must be registered with the SCC to do business in Virginia and also be in good standing with the SCC. The Construction Division Prequalification Office should be contacted for assistance in determining the SCC status of a firm.
10. If the Contract contains the Special Provision "Required Contract Provisions Federal-Aid Construction Contracts", the actual subcontract between the Prime Contractor and the subcontractor contains the required stipulations in the Special Provision.

If the sublet request is approved, the appropriate sublet number should be assigned by the designee on the C-31, notification of the approval given to the Contractor in writing as soon as possible, a copy sent to the Contractor. If necessary, verbal authorization for the subcontractor to work on the project may be given to the Contractor immediately after the C-31 is approved in writing. If the sublet request is denied, the Contractor should be notified of the denial as soon as possible along with the reason(s) for the denial.

In accordance with the specifications on subcontracting, there are instances when prequalification is not required. The attached table can be used for guidance to determine the minimum submission and approval necessary for each condition listed. These conditions are not all inclusive and they do not supersede specific contract requirements.

Whether there is an approved Form C-31 or not, firms performing work on the contract may be subject to all contract requirements including insurance, EEO, payroll, and labor rates.

Condition	Prequal. Required	Approved C-31 Required	Notification of Firm's Name & Items of Work	Engineer's Written Approval
Manufacture or Supply of Material	NO	NO	NO	NO
Hauling of Material	NO	NO	NO	NO
Service Rental (Such as barrels or barrier)	NO	NO	NO	NO
Regular Contract Line Items	YES	YES	---	---
Lower Tiers (Items or parts of an item on a previously approved sublet)	NO	NO	YES	YES
Professional Services (Such as construction surveying or wave equations)	NO	NO	YES	YES
Professional Services	NO	NO	NO	NO
Asbestos or Lead Abatement	NO*	YES	---	---
Specialty Items Marked in Contract	NO	YES	---	---
Sublets \$25,000 or less on State Funded Contracts in accordance with Copied Note	YES	YES**	YES	VERBAL

* Must have the appropriate license to perform the specified work.

** To document "Verbal Approval" process

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
DBE AND SWAM PAYMENT COMPLIANCE REPORT

Page(s) _____ Of _____
(1a) Report No. _____
(1b) Period Ending _____

(2a) Federally Funded ☐
(2b) State Funded ☐
(2c) Order No. _____ (2d) Date of Execution _____
(2e) Contractor/Subcontractor _____
(2f) Route No. _____ (2g) Project No. _____ (2h) Contract Id. No. _____
(2i) FHWA No _____ (2j) District _____

(3) DBE and SWAM Firm Name, Certification No.	(4) Tax I.D. No.	(5) DBE and SWAM Category	(6) Allowable Credit of Contract or Agreement	(7) Allowable Credit		(8) Disallowed Credit (VDOT Use Only)		(9) Type of Work (Indicate Item Numbers & Work Description)
				(7a) This Quarter	(7b) To Date	(8a) This Quarter	(8b) To Date	
		DBE/MBE						
		DBE/MBE						
		DBE/MBE						
		DBE/MBE						
		DBE/MBE						
		DBE/MBE						
Total Dollar Amount Paid by Quarter and To Date by DBE and SWAM Category			DMBE					
			DWBE					
			SBE					
			WBE					
			MBE					

All "amounts paid" to certified DBE and
SWAM firms are to be reported and
submitted by VDOT's quarterly submittal
schedule. See Instructions.

I/WE certify under penalty of law that the information provided herein is accurate, current, and complete to the best of
my/our Knowledge.

Signature and Title of Company Official _____ Date _____
Print Name and Phone Number of Individual
Completing Report _____

**VIRGINIA DEPARTMENT OF TRANSPORTATION
INSTRUCTIONS FOR
DBE/SWAM PAYMENT COMPLIANCE REPORT – C63**

The Prime Contractor is required to submit a DBE Payment Compliance Report and requested to submit payments made to Small, Women-owned, and Minority-owned (SWAM) Business Enterprises for the designated quarterly reporting period. All amounts paid to **certified** DBE and SWAM businesses are subject to monitoring and enforcement mechanisms. It is the responsibility of the prime contractor to provide evidence of DBE and SWAM payments in response to monitoring and enforcement compliance reviews.

The instructions below correspond to each item on the report. Please follow the instructions.

- 1a. **Report No.**
Indicate the number of the report you are sending in sequence. For example: If this is the second report you are submitting, enter Report No. 2.
- 1b. **Period Ending**
Indicate the reporting period based on the Reporting Schedule listed in these instructions.
- 2a. **Federally Funded**
Indicate if contract is federally funded.
- 2b. **State Funded**
Indicate if contract is state funded.
- 2c. **Order No.**
Enter the "Call Order" number assigned to your project by VDOT
- 2d. **Date of Execution**
Enter the date the contract was executed by VDOT.
- 2e. **Contractor/Subcontractor**
Enter your company's name.
- 2f. **Route No.**
Enter the highway route number shown in your contract.
- 2g. **Project No.**
Enter the project number assigned to your project by VDOT.
- 2h. **Contract Id. No.**
Enter the contract identification number assigned to your project by VDOT.
- 2i. **FHWA No.**
Enter the FHWA number assigned to your project.
- 2j. **District**
Enter the District where the project under contract is located.
3. **DBE and SWAM Firm Name, Certification No.**
Enter all DBE/SWAM subcontractors utilized and their certification number.

4. **Tax I.D. No.**
Indicate the Federal Employer Identification No.
5. **DBE and SWAM Category** (As certified by the Virginia Department of Minority Business Enterprise)
Designate type of DBE/SWAM business:
DBE: DMBE – Disadvantaged Minority-owned Business
DWBE – Disadvantaged Woman-owned Business

SWAM: SBE – Small Business
MBE – Minority-Owned Business
WBE – Woman-Owned Business
6. **Allowable Credit of Contract or Agreement**
Dollar value of contract or agreement to be performed by the DBE and SWAM during the contract or agreement which is allowable for participation credit.
- 7a. **Allowable Credit This Quarter**
Dollar amount that can be credited for work performed in reporting quarter.
- 7b. **Allowable Credit To Date**
Dollar amount that can be credited for work performed since work commenced.
- 8a. **Disallowed Credit This Quarter**
Dollar amount of payment paid to DBE and SWAM that is NOT allowable for participation credit in reporting quarter.
- 8b. **Disallowed Credit To Date**
Dollar amount of payment that is NOT allowable for participation credit since work commenced.
9. **Type of Work** (Indicate Item Numbers)
State work item(s) performed and give description.

Effective July 1, 2007, All Form C-63s for a particular reporting period shall be submitted in an electronic format to the respective person in responsible charge in each District by the following dates of each calendar year.

REPORTING SCHEDULE

Quarter	Reporting Period	Date Due To Responsible VDOT Residency
1st	July 1 – September 30	Five (5) working days after the reporting period
2nd	October 1 – December 31	Five (5) working days after the reporting period
3rd	January 1 – March 31	Five (5) working days after the reporting period
4th	April 1 – June 30	Five (5) working days after the reporting period

If the submittal date falls on a weekend/holiday, the forms shall be submitted to the VDOT Responsible Charge District Office on the following business day.

INSTRUCTIONS FOR SAVING FORM C-63 DATA IN PDF FORMAT

Please be advised that the information that you have placed on the Form C-63 (PDF format) will not save to the file when you close the file. **To save your information while using the PDF format, you must use the correct procedures outlined below.**

** The following steps will describe the correct procedure for saving the data that you have placed on the PDF version of the Form C-63:

- Step #1** CLICK ON **"File"**
- Step #2** CLICK ON **"Save A Copy"**
- Step #3** CLICK ON **"Save A Blank Copy"**
- Step #4** ENTER your **"Firm Name"** as the File Name
- Step #5** ENTER the **"Order Number"** (see line 2c on Form C-63)
- Step #6** ENTER **Underscore (_)**
- Step #7** ENTER **"Report Number"** (see line 1a on Form C-63)
- Step #8** ENTER **"Quarter Ending"** (see line 1b on Form C-63)
- Step #9** ENTER the **"Year"** (last two digits only)
- Step #10** ENTER **".pdf"** as the appropriate file ending

EXAMPLE:

Firm Name:	Vdot Construction Co.
Order No.:	A01
Report No.:	5
Quarter Ending:	1st Quarter (Jul.1 – Sept. 30)
Year:	07

Using the information in the example, your file would be saved as:
vdotA01_050107.pdf

VIRGINIA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DIVISION (CD)

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM (IIM)

GENERAL SUBJECT: FINAL ACCEPTANCE LETTER	NUMBER: IIM-CD-2013-04.01
SPECIFIC SUBJECT: DBE GOALS AND SWAM POTENTIAL ACHIEVEMENTS	DATE: August 1, 2013
	SUPERCEDES: CD-2007-05
APPROVED: <div style="text-align: center;">Signature On File ----- Mark E. Cacamis, P.E., CCM State Construction Engineer</div> DATE: <u>August 1, 2013</u>	

DIRECTED TO - DISTRICT ADMINISTRATORS

The following procedures will be followed in determining project compliance; specifically with meeting the Disadvantaged Business Enterprise (DBE) goals or Small Women and Minority (SWAM) potential achievements.

On Federal projects nearing completion, the Contractor shall submit a Form C-63 marked Semifinal within 20 days of the submission of the last regular estimate. This will be accompanied by a letter of certification, signed by the prime Contractor and appropriate DBE, indicating the amount, including retainage, that remains to be paid. Form C-63A will no longer be required. Payments to DBEs will be verified using prompt payment procedures.

At the final acceptance of the project, a determination must be made by the person in responsible charge of the project and the District Civil Rights Manager (DCRM) regarding the Contractor's compliance or non-compliance with the project's DBE goals on Federal projects, and SWAMs' potential achievements on State projects:

1. If the Contractor is in compliance, the responsible charge will notify the Contractor by letter that it is in compliance with the goals or potential achievements, as applicable, on the project. Copies of that letter will be sent to the State Construction Engineer (Construction Engineer) and to the Civil Rights Division.

2. If the Contractor is not in compliance, the responsible charge will notify the Contractor by letter that it is in non-compliance with the goals or potential achievements, as applicable, on the project. Copies of that letter will be sent to the State Construction Engineer and to the Civil Rights Division. **Please note: When there is non-compliance on a Federal Project, this letter is critical in that it establishes a specific point from which to measure the various time frames if the Contractor wants to request a panel hearing.**
3. Follow the applicable sections of the Road and Bridge Specifications, Special Provisions or Special Provision Copied Notes.

On Federal projects, within 30 days of the payment of the Final estimate, the Contractor shall submit a Form C-63 marked Final. The final Form C-63 will be compared with the Semifinal submissions to assure proper payment has been made to the DBE subcontractors and make certain that the Contractor has fully complied with the requirements of Special Provision for Section 110.04 of the specifications.

Attached are example letters for anticipated conditions, i.e., DBE goals met; DBE goals not met; no DBE goals; SWAM potential achievements met; SWAM potential achievements not met; no SWAM potential achievements. It is imperative that the language in bold type be included in the actual letter sent in accordance with the applicable condition(s).

EXAMPLE LETTER FOR DBE GOALS NOT MET FEDERAL PROJECTS

>Date

>Contractor Name

>P.O. Box

>City, State Zip

ATTN: >

SUBJECT: Project Number
 Final Inspection

To Addressee:

In accordance with your letter dated (DATE), a final inspection has been made on the above mentioned project on (DATE) with the following in attendance:

As authorized by the Chief Engineer, the work on the referenced project is deemed completed to the satisfaction of the Chief Engineer and the project is accepted as of (DATE).

This project has a >_____ percent DBE goal. At this writing, our records indicate the DBE goals have not been met. Paragraph 1 of the section on During the Contract, in Special Provision 110.04 states, "If the Contractor fails upon completion of the project to meet the required participation, the Contractor and any prime contractor affiliates, as in the case of a joint venture, may be enjoined from bidding as a prime Contractor, or participating as a subcontractor on VDOT projects for a period of 90 days."

Paragraph 2 of the section on During the Contract, in Special Provision 110.04 states, "Prior to enjoinder from bidding or denial to participate as a subcontractor for failure to comply with participation requirements, as provided hereinbefore, the Contractor may submit documentation to the Construction Engineer to substantiate that failure was due solely to quantitative underrun(s) or elimination of items subcontracted to DBEs and that all feasible means have been used to obtain the required participation. The Construction Engineer, upon verification of such documentation, shall make a determination whether or not the Contractor has met the requirements of the Contract."

Paragraph 3 of the aforementioned provision states, "If it is determined that the aforementioned documentation is insufficient or the failure to meet required participation is due to other reasons, the Contractor may request an appearance before the Administrative Reconsideration Panel to establish that all feasible means were used to meet such participation requirements."

If you elect to request an administrative review, as mentioned in Paragraph 2 of the section on During the Contract, of Special Provision 110.04, or a panel hearing, as mentioned in Paragraph 3 of the aforementioned provision, you are to advise the State Construction Engineer, 1401 East Broad Street, Richmond, Virginia, 23219, in writing, within 14 days of the date of this correspondence. Failure to make this written request within the time specified will result in an automatic ninety (90) day enjoinder. Any relevant documentation that you want to be considered by the Panel should be included in your panel hearing request. A panel hearing brochure is attached for your information.

Within forty-five (45) days of the final acceptance of the project, all required forms, certifications, and releases are due. Failure to submit these forms may extend the ninety (90) day time limit for final payment in accordance with Section 109.09 of the Specifications.

Sincerely,

Title (Responsible Charge Engineer)

>SEC/RE

cc: (Need to know personnel)

EXAMPLE LETTER FOR DBE GOALS MET FEDERAL PROJECTS

>Date

>Contractor Name

>P.O. Box

>City, State Zip

ATTN: >

SUBJECT: Project Number
 Final Inspection

To Addressee:

In accordance with your letter dated (DATE), a final inspection has been made on the above mentioned project on (DATE) with the following in attendance:

As authorized by the Chief Engineer, the work on the referenced project is deemed completed to the satisfaction of the Chief Engineer, and the project is accepted as of (DATE).

The project had a >_____ percent DBE goal. At this writing, our records indicate the DBE requirements will be met.

Within forty-five (45) days the final acceptance of the project, all required forms, certifications, and releases are due. Failure to submit these forms may extend the ninety (90) day time limit for final payment in accordance with Section 109.09 of the Specifications.

Sincerely,

Title (Responsible Charge Engineer)

>SEC/RE

cc: (Need to know personnel)

EXAMPLE LETTER FOR NO DBE GOALS FEDERAL PROJECTS

>Date

>Contractor Name

>P.O. Box

>City, State Zip

ATTN: >

SUBJECT: Project Number
 Final Inspection

To Addressee:

In accordance with your letter dated (DATE), a final inspection has been made on the above mentioned project on (DATE) with the following in attendance:

As authorized by the Chief Engineer, the work on the referenced project is deemed completed to the satisfaction of the Chief Engineer, and the project is accepted as of (DATE).

There were no DBE goals on this project.

Within forty-five (45) days of the final acceptance of the project, all required forms, certifications, and releases are due. Failure to submit these forms may extend the ninety (90) day time limit for final payment in accordance with Section 109.09 of the Specifications.

Sincerely,

Title (Responsible Charge Engineer)

>SEC/RE

cc: (Need to know personnel)

EXAMPLE LETTER FOR SWAM POTENTIAL ACHIEVEMENTS MET STATE PROJECTS

>Date

>Contractor Name

>P.O. Box

>City, State Zip

ATTN: >

SUBJECT: >Project Number
 Final Inspection

To Addressee:

In accordance with your letter dated (DATE), a final inspection has been made on the above mentioned project on (DATE) with the following in attendance:

As authorized by the Chief Engineer, the work on the referenced project is deemed completed to the satisfaction of the Chief Engineer, and the project is accepted as of (DATE).

At this writing, our records indicate the SWAM potential achievements committed on this state-funded project will be met.

Within forty-five (45) days of the final acceptance of the project, all required forms, certifications, and releases are due. Failure to submit these forms may extend the ninety (90) day time limit for final payment in accordance with Section 109.09 of the Specifications.

Sincerely,

Title (Responsible Charge Engineer)

>SEC/RE

cc: (Need to know personnel)

EXAMPLE LETTER FOR NO SWAM POTENTIAL ACHIEVEMENTS STATE PROJECTS

>Date

>Contractor Name

>P.O. Box

>City, State Zip

ATTN: >

SUBJECT: >Project Number
 Final Inspection

To Addressee:

In accordance with your letter dated (DATE), a final inspection has been made on the above mentioned project on (DATE) with the following in attendance:

As authorized by the Chief Engineer, the work on the referenced project is deemed completed to the satisfaction of the Chief Engineer, and the project is accepted as of (DATE).

There were no SWAM potential achievements on this project.

Within forty-five (45) days of the final acceptance of the project, all required forms, certifications, and releases are due. Failure to submit these forms may extend the ninety (90) day time limit for final payment in accordance with Section 109.09 of the Specifications.

.

Sincerely,

Title (Responsible Charge Engineer)

>SEC/RE

cc: (Need to know personnel)

EXAMPLE LETTER FOR SWAM POTENTIAL ACHIEVEMENTS NOT MET STATE PROJECTS

>Date

>Contractor Name

>P.O. Box

>City, State Zip

ATTN: >

SUBJECT: Project Number
 Final Inspection

To Addressee:

In accordance with your letter dated (DATE), a final inspection has been made on the above mentioned project on (DATE) with the following in attendance:

As authorized by the Chief Engineer, the work on the referenced project is deemed completed to the satisfaction of the Chief Engineer, and the project is accepted as of (DATE).

At this writing, our records indicate the SWAM potential achievements committed on this state-funded project will not be met. If appropriate, please provide documentation from the SWAM Contractors advising they could not or would not perform the work as noted on Form C-61. If the potential achievements were not met due to quantitative underrun(s) or elimination of items subcontracted, please state it with the correspondence from the SWAM.

If you are unable to obtain this information from the SWAM, please provide documentation concerning why the committed potential achievements were not met. Also, provide documentation of your good faith efforts to obtain a substitute SWAM to perform an equal or greater dollar value of work.

Within forty-five (45) days of the final acceptance of the project, all required forms, certifications, and releases are due. Failure to submit these forms may extend the ninety (90) day time limit for final payment in accordance with Section 109.09 of the Specifications.

Sincerely,

Title (Responsible Charge Engineer)

>SEC/RE

cc: (Need to know personnel)

TECHNICAL SPECIFICATIONS

SECTION 01000

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 REFERENCE SPECIFICATIONS FOR STANDARDS

- A. All referenced standards and specifications shall mean the latest edition, as of the date of these specifications, unless a specific issue is identified otherwise.
- B. In the event that referenced specifications or standards contain general requirements in conflict with the General or Special Conditions, or the scope of work of individual sections of these specifications, the Federal provisions or most conservative provisions shall govern/prevail.
- C. **STANDARD OF DESIGN AND WORKMANSHIP:** The intent of the specifications is to obtain for the Owner first class workmanship in all respects. All components shall be manufactured, fabricated, assembled, and finished in accordance with the best of recognized trade standards. All materials shall be new and suitable for the conditions specified.
- D. **CODES AND STANDARDS**
 - 1. The Virginia Uniform Statewide Building Code shall be the basis for minimum requirements not otherwise specified.
 - 2. Standards and Specifications of the Department of Public Works, City of Norfolk, Latest Revision.
 - 3. Standards and Specification of the Department of Utilities of the City of Norfolk, Latest Edition.
 - 4. Virginia Department of Transportation (VDOT) Road and Bridge Standards, Latest Edition.
 - 5. The Virginia Erosion and Sediment Control Handbook, Latest Edition
 - 6. The Federal Manual on Uniform Traffic Control Devices, Current Edition and the Virginia Supplement, Latest Edition.
 - 7. Hampton Roads Planning District Commission Regional Standards, Latest Edition.
 - 8. American Association of State Highway and Transportation Officials, Guide for the Development of Bicycle Facilities, Latest Edition.

9. Virginia Work Area Protection Manual, Latest Edition.
 10. American Association of State Highway and Transportation Officials, Guide for the Planning, Design, and Operation of Pedestrian Facilities, Latest Edition.
-
- 1.2 DRAWINGS AND SPECIFICATIONS; Contractor shall not scale for dimensions, but in case of lack of proper dimensions for drawings, shall request the Owner's Representative to furnish same. In case of discrepancy in dimensions between the small and large scale drawings, large scale drawings shall have preference.
 - 1.3 LAYING OUT THE WORK; A licensed surveyor shall layout the work, shall establish a permanent bench mark to which easy access may be had during the progress of the work, and shall determine all lines and grades as shown on the drawings. Contractor to provide cut sheets to the Owner's representative prior to commencement of work.
 - 1.4 MEASUREMENTS; Before ordering any material or doing any work, the Contractor and each subcontractor shall verify all measurements and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of the difference between actual dimensions and measurements indicated on the drawings. Any difference which may be found shall be submitted to the Owner's Representative for consideration before proceeding with the work
 - 1.5 PERMITS, FEES AND NOTICES; The Contractor will initiate application and pay all fees including building permit, water meter and utility connections for water and sanitary, gas service and meter. The OWNER will initiate application and pay fees regarding the permanent electrical service to and including the transformer.
 - 1.6 SANITARY ARRANGEMENTS; The Contractor shall provide on or near the premises suitable temporary sanitary conveniences and enclosures for the use of the workmen, shall maintain them in a sanitary condition, and shall remove same when directed by the Owner. The location of any temporary facilities shall be approved by the Owner. The contractor shall not use existing facilities without prior arrangement with and approval by the Owner.
 - 1.7 WATER SUPPLY; The Contractor shall provide and pay for all water required in the work, including all means of conveying same to the places where required.
 - 1.8 ELECTRICAL ENERGY; The Contractor shall pay all fees, obtain necessary permits and have meter installed for temporary power and light as may be required in the prosecution of the work.
 - 1.9 FIELD ENGINEERING AND SURVEYING; The Contractor is responsible for all field engineering and surveying required to complete any project. The cost for all field engineering and surveying will be included in the bid price of the contract and no additional compensation will be made. If not currently available, the City will establish vertical and horizontal control within 1000 feet of the project.

1.10 COMMENCEMENT OF WORK

Upon written Notice to Proceed, the Contractor must commence work on the project within 10 days of the dates specified in the Notice to Proceed letter and work continuously each day, Monday through Saturday until the project is complete, weather permitting. Liquidated damages in the amount of \$600.00 per day will be assessed against the Contractor for each and every day said Contractor does not work or days past due dates beginning 10 days after notice to proceed excluding legal holidays. Weather conditions will be determined by the Director of Public Works or his designee. All liquidated damages will be deducted from the project payment due the Contractor.

1.11 FINAL INSPECTION

Upon completion of a project, the Contractor shall request a final inspection in writing. The City has ten (10) working days from the receipt of the written request to perform the final inspection. The City has five (5) working days after the final inspection to notify the Contractor in writing of all discrepancies noted during the final inspection. The Contractor will commence work and work continuously until all discrepancies are corrected. The Contractor will be subjected to the liquidated damages as stated above.

1.13 CONTRACT DOCUMENTS

The Contractor will have as copy of the contract documents and the contract special provisions on the project site at all times.

1.14 EROSION AND SEDIMENT CONTROL

- A. Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed and maintained according to minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook Latest Edition and the City of Norfolk erosion and sediment control ordinance.
- B. The Contractor shall contact the City of Norfolk, Bureau of Environmental Services (441-2152) at least 48 hours prior the any land disturbing activity so that a preconstruction conference can be scheduled.
- C. The Contractor shall apply permanent or temporary soil stabilization to all denuded or disturbed areas within seven (7) days after final grade is reached on any portion of the site. Soil stabilization must also be applied to denuded or disturbed areas which may not be at final grade but which will remain undisturbed for longer than 30 days. Soil stabilization measures include vegetative establishment, mulching and the early application of gravel base material on areas to be paved.
- D. All erosion and sediment control measures are to be placed prior to or as the first step in construction.
- E. The Contractor shall inspect all erosion control measures periodically and after each runoff producing rainfall event. Any necessary repairs to maintain the effectiveness of

the erosion control services and cleanup of sedimentation are the responsibility of the Contractor and shall be made immediately.

- F. Temporary erosion and sediment control measures are not to be removed until all disturbed areas are stabilized. After stabilization is complete, all temporary measures shall be removed within 30 days. Trapped sediment shall be spread and seeded.
- G. The cost of Erosion and Sediment Control will be included in the unit bid prices of the contract.

1.15 MATERIALS & CONSTRUCTION METHODS

All materials will conform to the following unless otherwise specified on the project plans or in a written letter from the Director of Public Works or his designee. Unless otherwise stated, all referenced specifications will conform to the VDOT Road and Bridge Specifications, Latest Edition unless specifically noted otherwise.

1.16 TESTING

- A. The City may, at any time and at its discretion, require testing to ensure compliance with the specifications of the contract.
- B. All tests will be performed by a recognized testing laboratory selected by the City, qualified in the field of materials to be tested.
- C. If applicable, all tests will be conducted in accordance with the VDOT Manual for Virginia Test Methods, current edition.
- D. Payment for all tests performed will be in accordance with the following:
 - 1. The cost of all tests failing to meet minimum requirements will be borne by the Contractor.
 - 2. The cost of all tests that either meet or exceed minimum requirements will be borne by the City.

PART 2 (Not Applicable)

PART 3 - MEASUREMENTS AND PAYMENT

Measurement and payment shall be in accordance with the following, and the unit price bid shall constitute full payment for all equipment, labor, materials, tools, excavation, hauling, dewatering, disposal, and all incidentals necessary to complete the work as specified. The contract shall be awarded as a unit price bid and shall include the following items:

- 1. ITEM 1, “*MOBILIZATION*” – The Contractor shall provide a mobilization measured in a

lump sum with a maximum amount not to exceed 2.5% of the total base bid. In addition to mobilization and demobilization as well as incidentals such as bond, insurance, temporary facilities, etc.

2. ITEM 2, “*EROSION AND SEDIMENT CONTROL*” - The Contractor shall provide a lump sum price for furnishing, installing and maintaining all erosion and sediment controls including approved tree protection, temporary seeding and permanent seeding as shown on the plans, details and specifications.
3. ITEM 3, “*TREE REMOVAL*” - The Contractor shall provide a unit price to provide all labor, equipment and materials to remove the trees as indicated on the plans. Price shall include tree removal, stump removal, backfill, grading, site restoration, and seeding.
4. ITEM 4, “*CUT & HAUL (10' WIDE TRAIL)*” - The Contractor shall provide a unit price measured in cubic yards to provide all labor, equipment and materials to excavate the required depth to install the proposed trail including, but not limited to, excavating, hauling, grading, compacting, proof rolling, etc.
5. ITEM 5, “*3 INCH VDOT #9 STONE (10' WIDE TRAIL)*” - The Contractor shall provide a unit price measured in tons to provide all labor, equipment and materials to place 3” of VDOT #9 stone for the trail including, but not limited to, placing, grading and compacting stone, etc.
6. ITEM 6, “*6 INCH 21A BASE STONE (10' WIDE TRAIL)*” - The Contractor shall provide a unit price measured in tons to provide all labor, equipment and materials to place 6” of 21A stone base for the trail including, but not limited to, placing, grading and compacting stone, etc.
7. ITEM 7, “*1.5 INCH VDOT SM-9.5 ASPHALT (10' WIDE TRAIL)*” - The Contractor shall provide a unit price measured in tons to provide all labor, equipment and materials to install 1.5-inch of SM-9.5 for the trail as indicated on the plans.
8. ITEM 8, “*GEOTEXTILE FABRIC (10' WIDE TRAIL)*” - The Contractor shall provide a unit price measured in square yards to provide all labor, equipment and materials to install a geotextile fabric under the subbase material as indicated on the plans.
9. ITEM 9, “*PAVEMENT MARKINGS*” - The Contractor shall provide a lump sum price to provide all labor, equipment and materials to install pavement markings as indicated on the plans and the specifications.
10. ITEM 10, “*STEEL BOLLARDS*” - The Contractor shall provide a unit price measured per bollard to provide all labor, equipment and materials to install steel bollards as indicated on the plans. Price shall include all required excavation, concrete, pipe sleeve, stone bedding, and painting as indicated on the plans.

11. ITEM 11, “*WOOD BOLLARDS*” - The Contractor shall provide a unit price measured per bollard to provide all labor, equipment and materials to install wood bollards as indicated on the plans. Price shall include all required excavation and installation as indicated on the plans.
12. ITEM 12, “*SIGNAGE*” - The Contractor shall provide a lump sum price to provide all labor, equipment and materials to install signage as indicated on the plans. Price shall include all signage, mounting posts, and hardware required for installation.
13. ITEM 13, “*DETECTABLE WARNING AREA (TRUNCATED DOMES)*” - The Contractor shall provide a unit price measured in square feet to provide all labor, equipment to install the truncated domes as indicated on the plans. Price shall include all required excavation, forming, concrete, and finishing required to construct the detectable warning area in accordance with VDOT standards.
14. ITEM 14, “*FENCING AND GATES*” - The Contractor shall provide a unit price measured in linear feet for the complete installation of the fence sections as identified on the plans including, but not limited to, all fence posts, tie rods, rails, chain link fabric, gates, etc.
15. ITEM 15, “*FENCE REMOVAL*” - The Contractor shall provide a unit price measured in linear feet for the complete removal of the fence sections as identified on the plans including, but not limited to, all fence posts, tie rods, rails, chain link fabric, etc.
16. ITEM 16, “*BRIDGE*” - The Contractor shall provide a lump sum price for the complete installation of the bridge as identified on the plans including, but not limited to, pile caps, supports, decking, rails, concrete aprons, etc.
17. ITEM 17, “*BRIDGE TEST PILES*” - The Contractor shall provide a unit price measured in vertical linear feet for the complete installation of the bridge test piles as identified on the plans.
18. ITEM 18, “*BRIDGE PRODUCTION PILES*” - The Contractor shall provide a unit price measured in vertical linear feet for the complete installation of the bridge production piles as identified on the plans.
19. ITEM 19, “*PAVEMENT DEMOLITION AND REMOVAL*” - The Contractor shall provide a unit price measured in square yards to provide all labor, equipment and materials to excavate the required depth to remove existing road pavement including, but not limited to, excavating, hauling, grading, etc.
20. ITEM 20, “*2 INCH VDOT SM-12.5 ASPHALT (STREET AREA)*” - The Contractor shall provide a unit price measured in tons to provide all labor, equipment and materials to install 2-inch of SM-12.5 for the trail as indicated on the plans.
21. ITEM 21, “*6 INCH 21A BASE STONE (STREET AREA)*” - The Contractor shall provide a unit price measured in tons to provide all labor, equipment and materials to place 6” of 21A stone base for the trail including, but not limited to, placing, grading and compacting stone, etc.

22. ITEM 22, “*SIGN POLE BRACING/RELOCATING GUY WIRES*” - The Contractor shall provide a lump sum price to provide all labor, equipment and materials to remove and replace guy wire supports for overhead sign including, but not limited to, temporary supports, materials, installation, grading and compacting etc. The Contractor shall coordinate with Norfolk Southern for relocation of guy wires.

END OF SECTION 01000

SECTION 01300

SHOP DRAWINGS AND SUBMITTALS

PART 1 - GENERAL

1.1 GENERAL

- A. The Contractor shall provide shop drawings, samples and catalog data as specified.
- B. **ITEMS NOT INCLUDED IN SHOP DRAWINGS:** Shop drawings shall include all pertinent data required for the proper fabrication and installation of the materials specified.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SHOP DRAWINGS

- A. **Original Submittal.** One reproducible copy and five copies of all shop drawings shall be submitted for approval in ample time to coordinate necessary features of construction with all fabrication and installation requirements. Not less than fifteen working days shall be allowed to permit checking and appropriate action.
- B. **Resubmittal.** When a resubmittal is required, one print so indicating will be returned to the Contractor. After revision of the original, a new reproducible and three copies shall be submitted for approval.

3.2 SAMPLES

- A. **Original Submittal.** Two samples, unless otherwise specified, of each item for which samples are required shall be furnished for approval. Approval shall be obtained prior to delivery of the material to the project site. Such samples shall be representative of the actual material proposed for use in the project and of sufficient size to demonstrate design, color, texture, and finish when these attributes will be exposed to view in the finished work.
- B. **Resubmittals.** All rejected samples will be returned upon request, and any or all resubmittals required shall consist of two new samples.

3.3 CATALOG DATA

- A. Submittals. Four copies of catalog data are required for the original submittal and each subsequent resubmittal that may become necessary. Catalog data shall be submitted along with shop drawings. Two copies will be returned as noted.
- B. Catalog Data
 - 1. Catalogs or brochures submitted containing multiple items for approval need identification only on the exterior. In such instances the identification shall include page and catalog numbers of items which are submitted for approval.
 - 2. In the event that one or more of the multiple items are not approved in any submittal, additional copies will be required until all items are approved.

3.4 CONTRACTOR'S RESPONSIBILITY

- A. Representation. By his submittal of any shop drawings or catalog data, the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers, and similar data, or will do so, and that he has checked and coordinated each item with other applicable approved shop drawings and the contract requirements.
- B. Deviations. Approval of shop drawings, samples, or catalog data by the Owner shall not authorize any deviation from the requirements of the contract documents.

END OF SECTION 01300

SECTION 01700

PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

A. DEFINITIONS:

Project closeout is the term used to describe certain collective project requirements, indicating completion of the Work that are to be fulfilled near the end of the Contract time in preparation for final acceptance and occupancy of the Work by the Owner, as well as final payment to the Contractor and the normal termination of the Contract. Specific requirements for individual units of work are included in the appropriate sections in Division 2.

1.2 PREREQUISITES TO SUBSTANTIAL COMPLETION

A. General: Complete the following before requesting the Owner's inspection for certification of substantial completion, for the entire Work.

1. Prepare and submit to the Owner a list for approval of items remaining to be completed in accordance with General Conditions, the value of incomplete work, and reasons for the Work being incomplete. Items listed on the punch list will be directly coordinated with the Owner's representative to ensure a complete and accurate list.
2. Obtain and submit releases enabling the Owner's full, unrestricted use of the work and access to services and utilities. Where required, include occupancy permits, operating certificates and similar releases.
3. Touch-up and otherwise repair and restore marred exposed finishes.
4. Complete final cleaning up requirements, including touch-up painting of marred surfaces.
5. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents.

B. Upon receipt of the contractors list and request for Owner's verification, the Owner will either proceed with verification inspection or advise the Contractor of unfilled prerequisites.

1. Following initial verification inspection the Owner will either prepare a certificate of substantial completion, or will advise the Contractor of work which must be performed before the certificate will be issued. The Owner will repeat the inspection when

requested, but only when assured that the work has been substantially completed.

2. Results of the completed inspection will form the initial "punch-list" for final acceptance.

1.3 PREREQUISITES TO THE FINAL ACCEPTANCE

- A. General: Complete the following before requesting the Owner's final inspection for certification of final acceptance, and final payment as required by the General Conditions. List known exceptions, if any, in the request.
 1. Submit Record Documents on a monthly basis with application for payment.
 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 3. Submit a certified copy of the Owner's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.
 4. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 5. Submit an As-Built Plan showing deviations from the contract drawings neatly hand-marked in red ink.

1.4 WARRANTY

- A. A period of one year shall be established for all guarantees and warranties required by the contract specifications unless a longer period is specified. The installation and each item of equipment and material shall be guaranteed by the Contractor, and the equipment and material shall be warranted by the supplier and manufacturer.
- B. The guarantee and warranty period for all items, unless specifically listed otherwise, shall commence on the date of the Certificate of Substantial completion certified by the Owner's representative.
- C. In all cases, prior to beginning of the warranty period, equipment that has been used for any reason whatsoever shall be placed in first class operating condition.
- D. The extent of a guarantee and warranty shall be the requirement to repair or replace, without cost to the Owner, all equipment or workmanship which shall be found to be defective during the guaranteed period, exclusive of repairs due to improper maintenance or operation, or to normal wear, tear and usage, and to pay for all damage resulting from defects.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01700

SECTION 01710

CLEANING

PART 1 - GENERAL

- 1.1 SCOPE: Provide all labor and materials to fully and properly complete the work indicated on the drawings and/or specified. Unless otherwise specified this work includes cleaning during and at the completion of the project. General cleaning during regular progress of work is required by the General Conditions.
- 1.2 RELATED WORK SPECIFIED ELSEWHERE: Cleaning-up required for specific trades or work is specified in section pertaining to that trade or work.
- 1.3 REQUIREMENTS OF REGULATORY AGENCIES:
 - A. Safety and Insurance Standards: Maintain project in accordance with all applicable Federal, State and Local codes and ordinances and in accordance with any applicable insurance company regulations or standards.
 - B. Fire Protection: Store volatile waste in covered metal containers and remove from premises daily.
 - C. Pollution Control: Conduct clean-up and disposal operations to comply with local ordinances and anti-pollution laws.
 - D. Burning or burying of rubbish and waste materials on the project site is not permitted.
 - E. Disposal of volatile fluid wastes (such as mineral spirits, oils, paint thinner) in storm or sanitary sewer systems or into streams or waterways is not permitted.

PART 2 - PRODUCTS

- 2.1 CLEANING MATERIALS: Use only cleaning materials recommended by manufacturer of surface to be cleaned and cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.1 DURING CONSTRUCTION

- A. Ensure that the work-site is maintained free from accumulations of waste materials and rubbish.
- B. Sprinkle dusty debris with water.
- C. Provide on site containers for collection of waste materials, rubbish and debris.
- D. Do not allow waste materials, rubbish and debris to accumulate and become an unsightly or hazardous condition.
- E. Remove waste materials, rubbish and debris from the site and legally dispose of at public or private dumping areas off the Owner's property.
- F. The Contractor is responsible for the removal of all paint and marks on the concrete and concrete pavers which are caused by the Contractor or by others, such as utility companies marking lines for Miss Utility, graffiti, or other. A method of removal must be approved by the Owner.
- G. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on recently prepared surfaces.

3.2 FINAL CLEANING

- A. Use experienced workmen for final cleaning.
- B. At completion of construction and just prior to acceptance, conduct a final inspection of exposed surfaces.
- C. Remove grease, dust dirt, stains, labels, fingerprints and other foreign materials from surfaces.
- D. Repair, patch and touch-up marred surfaces to match adjacent finishes.
- E. Broom clean paved surfaces; rake clean other surfaces of grounds.

- 3.3 All cleaning as required by the Owner and as specified in these Contract documents shall not be measured and paid. All manpower, work, equipment and incidentals necessary to complete the cleaning shall be considered incidental for the contract.

END OF SECTION 01710

SECTION 02050

DEMOLITION

PART 1 - GENERAL

- 1.1 Related work specified elsewhere includes the following:
 - A. Section 02110 – Site Clearing
 - B. Section 02120 – Site Erosion Control
 - C. Section 02200 - Earthwork
- 1.2 Description: Demolition shall be classified as the removal of fence, trees, pavement, etc. as indicated on the plans, required to complete the work specified.
- 1.3 Project Conditions
 - A. Explosives shall not be used.
 - B. Burning is not permitted.
 - C. The composition of the existing roadway is varied and may be concrete containing rebar and/or wire reinforcing.

PART 2 - PRODUCTS

- 2.1 Remove and store equipment or material designated to be reused on site, or at a location indicated herein, on the drawings, or by the Owner's Representative or Owner.
- 2.2 Remove and store equipment or material designated to remain the property of the Owner on site or at the location indicated herein or on the drawings.
- 2.3 Remove from the site and take possession of any equipment or material not designated to be reused or to remain the property of the Owner.

PART 3 - EXECUTION

3.1 Demolition Operations

- A. The Contractor shall saw-cut existing concrete and asphalt between sections which are to be removed and adjacent sections which are to remain. All sawcuts shall be in a straight line. Saw-cuts shall be 4-inch depth minimum to allow removal of the demolished section, yet leave a smooth surface joint when section is repaired.
- B. Remove existing above-grade items including but not limited to posts, poles, fences, shrubs, and plants as specifically indicated or necessary to permit new construction. The Contractor shall coordinate the removal and/or replacement of such items with the Owner prior to beginning the demolition work.
- C. When working on private or public property, the Contractor shall exercise caution so as to avoid damage to existing items which are to remain. Damage to existing items shall be repaired by the contractor to match existing condition or better at the Contractor's expense.
- D. The area shall be wetted down thoroughly to prevent dust and dirt from rising.
- E. The existing trees identified to remain are very sensitive to construction activity and shall be protected.

3.2 Underground Utilities

- A. The Contractor shall exercise caution when working in areas of underground utilities. Underground utilities, as indicated on the drawings, are shown in the approximate location. Neither the Owner's Representative nor the Owner shall be held liable for any reason, for any omissions of underground utilities. The Contractor shall notify "Miss Utility" of Virginia, at 811, to locate utilities before beginning any work.

3.3 Cleanup

- A. Debris resulting from demolition shall be cleaned up continuously with the progress of the work.
- B. Debris will not be permitted to accumulate on the site. If the Contractor fails to remove excess debris promptly, the Owner reserves the right to remove it at the Contractor's expense.
- C. Remove debris from site without spillage. Keep pavement and area adjacent to site clean and free from mud, dirt, and debris at all times.
- D. Salvage material that is to become property of the Contractor, and is not to be reused in construction, shall be removed within 10 days. Sale of material on the site is prohibited.

- E. Remove all tools, equipment, material, and rubbish from the demolition upon completion of demolition.
- F. Leave the site clean, neat, and orderly and in a condition to begin new construction.
- G. The Contractor will be responsible for the removal of all debris and waste materials associated with this project to include but not be limited to; dirt, asphalt, broken concrete, and unsuitable material. The City dump will not be permitted to be used for any materials on this project. The Contractor shall identify waste areas to be used at the pre-construction meeting.

END OF SECTION 02050

SECTION 02110

SITE CLEARING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 DESCRIPTION OF WORK

- A. This Section includes the following:

1. Protection of existing trees.
2. Removal of trees and other vegetation.
3. Topsoil stripping.
4. Clearing and grubbing.
5. Demolition.

1.3 SUBMITTALS

- A. Products Data: Not required

1.4 QUALITY ASSURANCE

- A. Contractor's Qualification: Firm with at least 3 years of successful experience on projects with similar work.

1.5 PROJECT CONDITIONS

- A. Traffic: Conduct site clearing operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction.
- B. Protection of Existing Improvements: Provide protections necessary to prevent damage to existing improvements indicated to remain in place.
 1. Protect improvements on adjoining properties and on Owner's property.
 2. Restore damaged improvements to their original condition, as acceptable to property owners.

- C. Protection of Existing Trees and Vegetation: Protect existing trees and other vegetation indicated to remain in place, against unnecessary cutting, breaking or skinning of roots, skinning or bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line. Provide temporary guards to protect trees and vegetation to be left standing.
1. Provide protection for roots over 1-1/2 inch diameter that are cut during construction operations. Coat cut faces with an emulsified asphalt, or other acceptable coating, formulated for use on damaged plant tissues. Temporarily cover exposed roots with wet burlap to prevent roots from drying out; cover with earth as soon as possible.
 2. Repair or replace trees and vegetation indicated to remain which are damaged by construction operations, in a manner acceptable to the Owner, Engineer or Owner's Representative. Employ a licensed arborist to repair damages to trees and shrubs.

PART 2 - PRODUCTS (Not applicable to this Section)

PART 3 - EXECUTION

3.1 SITE CLEARING

- A. General: The contractor shall perform a site visit prior to the start of construction. If the existing conditions differ from the contract drawings the contractor shall notify the owner prior to commencing work. The contractor shall meet with the owner to determine selective clearing limits prior to starting clearing operations. The contractor shall clear the limits of the vehicular drive isles first. Once the drive isles have been cleared the contractor shall notify the Owner to field locate trees which shall be protected. The contractor shall then proceed with the clearing operation and provide tree protection to the selected trees in accordance with the Virginia Erosion and Sediment Control Handbook.
- B. Remove trees, shrubs, grass and other vegetation, improvements, or obstructions as required to permit installation of new construction. Remove similar items elsewhere on site or premises as specifically indicated. "Removal" includes digging out and lawful, off-site, disposing of stumps and roots.
1. Cut minor roots and branches of trees indicated to remain in a clean and careful manner, where such roots and branches obstruct installation of new construction.
- C. Topsoil: Topsoil is defined as friable clay loam surface soil found in a depth of not less than 4 inches. Satisfactory topsoil is reasonably free of subsoil, clay lumps, stones, and other objects over 1/2 inch in diameter in any direction, and without weeds, roots, and other objectionable material.

1. Strip topsoil to whatever depths encountered in a manner to prevent intermingling with underlying subsoil or other objectionable material.
 2. Remove heavy growths of grass from areas before stripping.
 3. Where existing trees are indicated to remain, leave existing topsoil in place within drip lines to prevent damage to root system.
 4. Stockpile topsoil in storage piles in areas indicated or directed. Construct storage piles to provide free drainage of surface water. Cover storage piles, if required, to prevent wind erosion.
 5. Dispose of unsuitable or excess topsoil same as specified for disposal of waste material.
- D. Clearing and Grubbing: Clear site of trees, shrubs and other vegetation, except for those indicated to be left standing.
1. Completely remove stumps, roots, and other debris protruding through ground surface.
 2. Use only hand methods for grubbing inside drip line of trees indicated to remain.
 3. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.
 4. Place fill material in horizontal layers not exceeding 6 inches loose depth, and thoroughly compact to a density equal to adjacent original ground.
- E. Demolition: Remove existing above-grade and below-grade improvements as indicated on the drawings and as necessary to facilitate new construction. Remove all debris resulting from demolition and dispose of it lawfully, off-site.

3.2 DISPOSAL OF WASTE MATERIALS

- A. Burning is not permitted. The contractor shall remove all clearing debris from the site and dispose of it in a lawful manner. Should burning be permitted the contractor shall credit the owner for the contract amount for the hauling and disposal of debris.
- B. Removal from Owner's Property: All clearing debris and miscellaneous debris shall be removed from the Owner's property. Remove waste materials and unsuitable or excess topsoil from Owner's property and dispose of it lawfully.
- C. Leave on-site enough topsoil to complete on-site work.

END OF SECTION 02110

SECTION 02120

SITE EROSION CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The General Provisions of the Contract, including General Conditions and Supplementary Conditions, and Division 1 Specification Sections shall apply to work in this section.

1.2 DESCRIPTION OF WORK

- A. Furnish materials, labor and equipment to provide erosion control measures shown on the drawings.

1.3 SUBMITTALS

- A. Not Applicable

1.4 QUALITY ASSURANCE

- A. Comply with requirements of authorities having jurisdiction. Except where otherwise shown on the Drawings or specified, comply with the applicable recommendations of the latest edition of the "Virginia Erosion and Sediment Control Handbook."
- B. Erosion control measures shall be established at the first phases of construction and maintained during the entire length of construction. The specifications and Drawings are not represented as being comprehensive, but rather convey the intent to provide complete slope protection and erosion control for both the Owner's property and adjacent property. The Contractor shall keep and maintain the adjacent right-of-way clean and free of dirt, dust, and debris.
- C. The contractor shall comply with the applicable regulations of the City of Norfolk, Virginia, erosion and sediment control standards and specifications deemed necessary before, during and after construction.
- D. Contractor is responsible to provide and maintain erosion controls to the satisfaction of the Engineer, Owner and the City of Norfolk Inspections.
- E. Contractor shall schedule construction in a manner to best provide slope protection and erosion controls. Install grass slopes, ditches and other areas disturbed by construction at the earliest possible time during the construction sequence.

- F. Damage to a stream or other natural area is herein defined as the addition of soil, rock and topsoil, whether deposited by poor construction practice, sedimentation, wind or other means; vegetable matter such as whole trees or any part thereof, or remnants from clearing processes; waste construction materials such as concrete, broken pipe, etc. waste from construction equipment such as petroleum product spills, oil cans, damaged equipment or parts thereof, or any other additions which can be classified or detrimental to said areas.
- G. Damage will be specified by the owner or authorities having jurisdiction, by actual site inspections. If it is determined that damage has been caused by the Contractor through negligence, carelessness, by intention, or other, then the Contractor will act as directed by the Owner to correct said damage as quickly as possible and to take steps to prevent further damage. Such corrections to damage will be at no cost to the Owner.

1.5 JOB CONDITIONS

- A. The contractor shall construct and maintain silt traps sufficient to prevent soil being eroded from the site into any adjacent drainage system, ditch or water course; any material that is so eroded shall be promptly removed.
- B. Contractor is to monitor and take precautions to control dust including (but not limited to) use of water on a daily basis or chemical dust palliative, limiting the number of vehicles allowed on site, minimizing the operating speed of all vehicles, etc.
- C. All streets, pipes and established conveyance devices shall be cleaned of mud and debris. All erosion control devices shall be maintained on a daily basis or as required by the Highway Division.
- D. The Contractor shall inspect and remove and replace all Erosion and Sedimentation control measures for the proposed drainage system daily. Any siltation shall be removed from the proposed drainage system immediately. The contractor shall protect the underground infiltration system from siltation at all phases of construction.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Erosion Control: Material shall be in accordance with details on Drawings and meeting requirements of local authorities having jurisdiction.

PART 3 - EXECUTION

3.1 EROSION CONTROL

- A. Establish and maintain erosion control protection work required by the Drawings and specifications.

END OF SECTION 02120

SECTION 02200

EARTHWORK

PART 1 - GENERAL

1.1 WORK INCLUDED, BUT NOT LIMITED TO

- A. Excavation, backfill, rough and finish grading, together with placement and preparation of topsoil for lawns and planting.

1.2 DEFINITIONS

- A. Excavation: consists of removal of material encountered to subgrade elevations indicated. Material not to be reused shall be disposed of properly.
- B. Subgrade: the undisturbed earth or the compacted soil layer immediately below structure or topsoil materials.

1.3 QUALITY ASSURANCE

- A. Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction.
- B. Unless otherwise indicated comply with Virginia Department of Transportation (VDOT) Current Specifications and Standards for Road and Bridge Construction.

1.5 PROJECT CONDITIONS

- A. Existing Utilities: Contractor shall locate existing underground utilities in areas of work.
- B. Should uncharted or incorrectly charted utilities be encountered, consult Owner immediately for directions. Cooperate with Owner in keeping respective services and facilities in operation.
- C. Repair damaged utilities to the satisfaction of utility company and Owner. Provide minimum 48-hour notice to the Owner and Utility Company prior to interruption of the utility. Contractor shall not proceed with utility interruption until receiving written notification to proceed.
- D. Use of Explosives: The use of explosives is not permitted.
- E. Protection of Persons and Property: Barricade open excavations and post warning signs and lights.
- F. Operate warning lights as required by authorities having jurisdiction.

- G. Protect all existing structures, utilities, sidewalks, pavements, lawns, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- H. Dust Control: Control dust on and near the Work, and on and near all off-site borrow areas. Thoroughly moisten all surfaces to prevent dust from being a nuisance to the public, and operation of existing facilities.

1.6 PROTECTION OF EXISTING TREES AND VEGETATION

- A. Protect existing trees and other vegetation not indicated to be removed, against unnecessary cutting, breaking or skinning or roots, skinning or bruising of bark, smothering of trees by stockpiling construction or excavated materials within the drip line, excess foot or vehicular traffic, or parking of vehicles within drip line.
- B. Repair or replace trees and vegetation not indicated to be removed which are damaged by construction operations, in a manner acceptable to the City Arborist. Employ a licensed arborist to repair damages to trees or shrubs.
- C. Trees not indicated for removal, which are damaged or destroyed through the contractor's negligence, will require full remuneration at the appraised value as determined by the City Arborist.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. Satisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups GW, GP, GM, SM, SW, and SP. CL may be used as base fill in areas to be landscaped.
- B. Unsatisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups ML, MH, CL, CH, OL, OH, and PT.
- C. Backfill and Fill Materials: Satisfactory soil materials free of clay, rock or gravel larger than 1/2 inches in any dimension (unless required by approved material gradation), debris, waste, frozen materials, vegetation and other deleterious matter.
- D. Select Fill: Satisfactory sandy soil materials having a soaked C.B.R. greater than or equal to 15.
- E. Base Aggregate: Type 21A Stone as defined in the V-DOT Road and Bridge Standard, latest edition.

PART 3 - EXECUTION

3.1 EXCAVATION

- A. Excavation is unclassified and includes excavation to required subgrade elevations, regardless of character of materials and obstructions encountered.
- B. Cold Weather Protection: Protect excavation bottoms against freezing.
- C. Excavation near existing vegetation (i.e. trees to remain) shall be hand dug so as to avoid damage to existing vegetation and to minimize width of the excavated area. See plans for Tree Protection Notes.

3.2 DE-WATERING: Prevent surface water and ground water from flowing into excavations and from flooding project site and surrounding area.

- A. Do not allow water to accumulate in excavations. Remove water to prevent softening of trenches, foundation bottoms, undercutting structures, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps and discharge lines, and other de-watering system components necessary to convey water away from excavations.
- B. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations to natural water course or storm system in accordance with local codes and ordinances. Do not use trench excavations as temporary drainage ditches.

3.3 MATERIAL STORAGE: Stockpile satisfactory excavated materials where indicated or directed. Place, grade and shape stockpiles for proper drainage. Do not store within drip line of trees.

3.4 BACKFILL AND FILL

- A. General: Place soil material in layers to required subgrade elevations, for each area classification listed below, using materials specified in Part 2 of this Section.
- B. Under grassed areas, use satisfactory borrow material. Do not use organic material to backfill excavated areas..
- C. Under walks and pavements, use select backfill material as specified in Paragraph 2.1.D. Excavated or borrow material, or a combination of the two materials, that meets the requirements of these specifications is satisfactory material.

3.5 PLACEMENT AND COMPACTION

- A. Ground Surface Preparation: Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills.

- B. The surface of the exposed subgrade shall be inspected by probing or testing to check for pockets of soft or unsuitable material. Excavate as required to remove soft soil.
- C. Care shall be exercised during the grading operations at the site. Combinations of excess surface moisture from precipitation and the traffic of heavy construction equipment may create "pumping" and a general deterioration of the bearing capabilities of the shallower soils. The grading should therefore be carried out during a dry season, if possible. Additional undercutting of the exposed Subgrade should be anticipated should the subgrade become saturated and worked by construction equipment. The contractor shall only expose subgrade areas in the parking lot area that can receive stone within 24 hours.
- D. The exposed subgrade shall be well drained to prevent accumulation of water on the site. Limit construction traffic across the site such that traffic is within well defined areas.
- E. Proofroll the surface of the exposed subgrade with a loaded tandem axle dump truck. Pockets of soft soil encountered which pump or will not properly compact under proofrolling shall be removed and replaced with controlled fill. Replacement of subgrade with controlled fill shall be performed under the conditions of the contract. The contractor shall not excavate or replace unsuitable subgrade without written authorization from the owner or his special inspector.
- F. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. Compact each layer to required percentage of maximum dry density or relative dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
- G. Control soil and fill compaction, providing minimum percentage of density specified for each area classification indicated below. Correct improperly compacted areas or lifts as directed by Owner if soil density tests indicate inadequate compaction.
 - 1. Percentage of Maximum Density Requirements: Compact soil to not less than the following percentages of maximum density, in accordance with ASTM D 1557:
 - 2. Under structures, slabs and steps, and pavements, compact top 6 inches of subgrade and each layer of backfill or fill material at 98 percent maximum density.
 - 3. Under lawn or unpaved areas, compact top 6 inches of subgrade and each 12" layer of backfill or fill material at 90 percent maximum density.
 - 4. Under walkways, compact top 6 inches of subgrade and each 12" layer of backfill or fill material at 95 percent maximum density.
 - 5. Moisture Control: Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade or layer of soil material. Apply water in minimum quantity as necessary to prevent free water from appearing on surface during or subsequent to compaction operations.
 - 6. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
 - 7. Stockpile or spread soil material that has been removed because it is too wet to permit compaction. Assist drying by discing, harrowing, or pulverizing until moisture content is reduced to a satisfactory value.

3.6 GRADING

- A. General: Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated or between such points and existing grades.
- B. Grading Surface of subgrade and backfill under pavements and Slabs: Grade smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of 1/2 inch when tested with a 10-foot straightedge.
- C. Compaction: After grading, compact subgrade surfaces to the depth and indicated percentage of maximum or relative density for each area classification.

3.7 PAVEMENT AGGREGATE FILL

- A. General: Aggregate fill consists of placement of stone material, in layers of indicated thickness, over subgrade surface to support asphalt pavement.
- B. Placing: Place aggregate fill material on prepared subgrade, in layers of uniform thickness, conforming to indicated cross-section and thickness. Maintain optimum moisture content for compacting material during placement operations.
- C. When a compacted aggregate fill is indicated to be 6 inches thick or less, place material in single layer

3.8 FIELD QUALITY CONTROL

- A. Quality Control Testing During Construction: Allow testing service to inspect and approve each subgrade and fill layer before further backfill or construction work is performed.
- B. Perform field density tests in accordance with ASTM D 1556 (sand cone method) or ASTM D 2167 (rubber balloon method), as applicable.
- C. Field density tests may also be performed by the nuclear method in accordance with ASTM D 2922, providing that calibration curves are periodically checked and adjusted to correlate to tests performed using ASTM D 1556. In conjunction with each density calibration check, check the calibration curves furnished with the moisture gages in accordance with ASTM D 3017.
- D. If field tests are performed using nuclear methods, make calibration checks of both density and moisture gages at beginning of work, on each different type of material encountered, and at intervals as directed by the Owner.

3.9 EROSION CONTROL

- A. Provide erosion control methods in accordance with requirements of authorities having jurisdiction and Section 02120, "Site Erosion Control".

3.10 MAINTENANCE

- A. Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades in settled, eroded, and rutted areas to specified tolerances.
- C. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.
- D. Settling: Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add backfill material, compact, and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible. All of the above to be done under the supervision of the Owner's independent testing laboratory.

3.11 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Removal from Owner's Property: Remove waste materials, including unacceptable, or excess, excavated material, trash, and debris, and dispose of it off Owner's property, in a lawful manner.

END OF SECTION 02200

SECTION 02491

SEEDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- 1.1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- 1.2.1 This Section includes provisions for the following items:

- 1.2.1.1 Seeding.
- 1.2.1.2 Final Grading.
- 1.2.1.3 Ground cover.
- 1.2.1.4 Soil amendments.

All disturbed areas within the project limits which are not located under pavements, walks and buildings shall be seeded as per the specifications contained herein.

- 1.2.2 Related Sections: The following sections contain requirements that relate to this Section.

- 1.2.2.1 Excavation, filling, and rough grading required to establish elevations shown on drawings is specified in Division 2 Section, "Earthwork."

- 1.2.3 Quality Control:

- 1.2.3.1 Seed shall comply with standards outlined in the U.S. Department of Agriculture Rules and Regulations under the Federal Seed
- 1.2.3.2 Analysis and Standards: Package standard products with manufacturer's certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.
- 1.2.3.3 Topsoil: Before delivery of topsoil, furnish Owner with written statement giving location of properties from which topsoil is to be obtained, names and addresses of owners, depth to be stripped, and crops grown during past 2 years.

1.3 SUBMITTALS

- 1.3.1 General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

- 1.3.2 Soil analysis including:
 - 1.3.2.1 Ph factor.
 - 1.3.2.2 Mechanical analysis (composition)
 - 1.3.2.3 Percentage of organic content
 - 1.3.2.4 Sufficient quantity of topsoil samples to give a representative analysis of on-site topsoil topsoil from outside sources, if any.
- 1.3.3 Certificate of crop purity from seed containers
 - 1.3.3.1 Certificates certifying guaranteed analysis of soil supplement products as recommended by laboratory.
 - 1.3.3.2 Certificates indicating that the material is a single variety and of premium quality.
- 1.4 DELIVERY, STORAGE AND HANDLING
 - 1.4.1 Deliver fertilizer, lime, mulch, and seed in original unopened and undamaged containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery, and while stored at site.
- 1.5 JOB CONDITIONS
 - 1.5.1 Utilities: Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.
 - 1.5.2 Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Owner & correct conditions before planting.
- 1.6 SEQUENCING AND SCHEDULING
 - 1.6.1 Planting Time: Proceed with, and complete seeding work as rapidly as portions of site become available, working within seasonal limitations for each kind of landscape work required.
 - 1.6.1.1 Plant or install materials during normal planting seasons for each type of plant material required.
 - 1.6.1.2 Correlate planting with specified maintenance periods to provide maintenance from date of substantial completion.
- 1.7 SPECIAL PROJECT WARRANTY
 - 1.7.1 Provide a uniform stand of grass vigorously growing by watering, mowing, and maintaining lawn areas until final acceptance by owner. Re-seed areas with specified materials, which fail to provide a uniform stand of grass, until all affected areas are accepted by the Owner.

PART 2 - PRODUCTS

2.1 TOPSOIL

- 2.1.1 Provide new topsoil that is fertile, friable, natural loam, surface soil, reasonably free of subsoil, clay lumps, brush, weeds and other litter, and free of roots, stumps, stones larger than 1/2 inch in any dimension, and other extraneous or toxic matter harmful to plant growth. It shall not be excessively acid or alkaline & shall be without admixture of subsoil. It shall contain at least 6% organic matter.
- 2.1.1.1 Obtain topsoil from local sources or from areas having similar soil characteristics to that found at project site. Obtain topsoil only from naturally, well-drained sites where topsoil occurs in a depth of not less than 4 inches. Do not obtain from bogs or marshes.

2.2 SOIL AMENDMENTS

- 2.2.1 Organic Compost: "Nature's Blend Compost" as produced by the Southeastern Public Service Authority (SPSA), or equivalent. Compost shall consist of well-broken down organic material, free of matter harmful to plant life.
- 2.2.2 Mulch: N/A
- 2.2.3 Commercial Fertilizer: Complete slow release fertilizer of neutral character, with some elements derived from organic sources and containing following percentages of available plant nutrients:
 - 2.2.3.1 Fertilizer shall have an analysis of 18-24-10 and be uniform in composition, free flowing and shall be controlled release commercial grade.
- 2.2.4 Lime: shall be ground dolomitic limestone containing not less than 85% of total carbonates and shall be ground to such fineness that at least 50% will pass through a 100-mesh sieve and 100% will pass through a 20-mesh sieve. Coarser materials will be accepted provided the specified rates of application are increased proportionally on the basis of quantities passing the 100-mesh sieve, but no additional payment will be made for the increased quantity.
- 2.2.5 Water: The Contractor shall make, at his own expense, whatever arrangements may be necessary to ensure an adequate supply of water to meet the needs of this contract. He shall also furnish all necessary hose, equipment, attachments, and accessories necessary the adequate irrigation of seeded areas as may be required to complete the work as specified. The water shall be free from oil, acid, alkali, salt, and other substances harmful to growth of grass.

- 2.2.6 Seed: shall be a mixture of Southern Belle Fescue and Primavera Bermuda, with proportions of each being planted according to the seasonal chart provided in this section. All seed shall be labeled in accordance with the U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act. Seed shall be furnished in sealed standard containers. No seed which has become wet, moldy, or otherwise damaged in transit or in storage shall be acceptable. In no case shall the weed seed content exceed 1% by weight. The grass seed mixture formula in each lot of seed shall be as specified herein in planting seed.

<u>Planting Season</u>	<u>Variety</u>	<u>Percent by weight</u>
Season 1	Bermuda / Fescue	80% / 20%
Season 2	Fescue / Bermuda	80% / 20%
Season 3	Annual Rye (Temporary)	100%
<u>Season 1</u>	<u>Season 2</u>	<u>Season 3</u>
May 15 - July 15	Aug. 15 - Oct. 15	Oct. 6 - April 30

- 2.2.7 Lawn Mulch: Straw stalks of any threshed grain or tall hay grass stalks, free from seed bearing stalks or roots harmful to lawn growth. Mulch material containing noxious weeds, decomposed material or brittle weed material is not acceptable.

- 2.2.8 The contractor may substitute seeded areas with sod at no additional expense to the Owner.

PART 3 - EXECUTION

3.1 PREPARATION OF SEED BED

- 3.1.1 Equipment necessary for the proper preparation of ground surface and for the handling and placing of all required materials shall be on hand, in good condition.
- 3.1.2 Clearing: Prior to the grading and tillage operations, vegetation on the site that might interfere with the seeding operations shall be treated with "round-up" as per the manufacturer's directions. After vegetation shows the effect of the herbicide it shall be mowed, grubbed, raked and removed from the site. Prior to or during grading and tillage operations, the ground surfaces shall be cleared of all stones, roots, cable, wire, and other materials one half inch or larger that might hinder proper grading, tillage, seeding, or maintenance operations.
- 3.1.3 Grading: Grades on the areas to be seeded shall match those shown on the construction plans. When no grades are shown surfaces shall be left in an even and properly compacted condition so as to prevent the formation of depressions where water will stand.

- 3.1.4 Tillage: Undisturbed areas to be seeded shall be tilled thoroughly to a depth of at least three inches by plowing, discing, harrowing, or other approved method until the condition of the soil is acceptable. Undulations or irregularities in the surface that would interfere with further construction operations or maintenance shall be leveled before the next specified operation.
- 3.1.5 Finished Grading: After subgrade soil has been prepared the contractor shall provide topsoil to a minimum depth of 4". All areas to be seeded as shown on the drawings. The surface shall be graded to eliminate any depressions which might hinder drainage. Any soil which is in a frozen or muddy condition shall not be worked.
- 3.1.6 Clean Up: After completion of the above operations, the surface to be seeded shall be clear of stones, and other objects larger than one half inch in thickness or diameter, and of roots, brush, wire, and maintenance operations. Paved areas over which hauling operations are conducted shall be kept clean.
- 3.2 APPLICATION OF FERTILIZER AND LIME
- 3.2.1 Fertilizer shall be distributed uniformly at the rate specified by the manufacturer over the areas to be seeded, and shall be incorporated into the soil to a depth of at least one half inch by discing, harrowing, or other acceptable methods. The incorporation of fertilizer may be a part of the tillage operation specified herein.
- 3.2.2 Lime: Immediately following or simultaneously with the incorporation of the fertilizer, lime shall be distributed uniformly at a rate of 40 pounds per 1,000 square feet or as recommended in the soil analysis report. Lime shall be incorporated into the soil to a depth of at least one half inch by discing, harrowing or other acceptable methods. The incorporation of the lime along with the fertilizer may form a part of the tillage operation specified herein.
- 3.3 APPLICATION OF SEED
- 3.3.1 Time of Seeding shall be between February 15 and March 15, or between September 1 and October 15. When delays in operation carry seeding work beyond the specified planting season, or when conditions are such by reason of drought, high winds, excessive moisture or other factors, that satisfactory results are not likely to be obtained, the work will be stopped and shall resume only when directed.
- 3.3.2 Methods of Sowing: Seed shall be broadcast either by hand or approved sowing equipment. Seed shall be applied at the rate of 6 lbs. Per 100 sf. One half the total quantity of seed shall be applied with the sower moving in one direction over the entire area. The second half shall be applied with the sower moving at right angles to initial sowing. No broadcast seeding shall be done during windy weather. Seed bed shall be lightly raked. Depth of coverage not to exceed one half inch.

- 3.3.3 Compacting: Immediately after the seeding operations have been completed, the entire seeded area shall be compacted by means of a roller or other approved equipment weighing 60 to 90 pounds per linear foot of roller. If the soil is of such type that a smooth or corrugated roller cannot be operated satisfactorily, a pneumatic roller (not wobble wheel) shall be used. The pneumatic roller shall have tires of sufficient size so that complete coverage of the soil surface is obtained.
- 3.3.4 Mulching: Seed bed shall be mulched following the compaction operations. Mulch shall be lightly distributed over the entire seed bed at approximately 75 lbs. per 1000 sf. No masses of mulch which would inhibit seed germination shall be accepted.
- 3.3.5 Watering: Seed bed shall be watered immediately following mulching operation. Sufficient water shall be applied to soak seed bed to a 2 inch depth. Care shall be taken to prevent any erosion of prepared seed bed.

3.4 HYDRO SEEDING OPTION

- 3.4.1 The contractor has the option of hydro seeding areas indicated to be seeded, at no additional cost to the Owner. If hydro seeding option is used, the contractor shall mix the seed in the presence of the Owner or his representative. Soil shall be prepared as specified in this section. Contractor shall omit the use of hay or wheat straw mulch. Seed, lime, and fertilizer shall be applied at the rates specified within this section. Wood cellulose fiber for use with hydraulic application of grass seed and fertilizer shall consist of specially prepared wood cellulose fiber, processed to contain no growth or germination-inhibiting factors and dyed an appropriate color to facilitate visual metering of the application of materials. On an air-dry weight basis, the wood cellulose fiber shall contain a maximum of 12 percent moisture, plus or minus three percent, at the time of manufacture. The ph range shall be from 3.5 to 5.0. The wood cellulose fiber shall be manufactured so that after addition and agitation in slurry tanks with fertilizers, grass seeds, water, and other approved additives, the fibers in the material will become uniformly suspended to form a homogeneous slurry. When hydraulically sprayed on the ground the material will form a blotter-like cover impregnated uniformly with grass seed. The cover will allow the absorption of moisture and allow rainfall or applied water to percolate to the underlying soil. When hydro seeding, the seed and fertilizer, or the seed, fertilizer, and approved mulch material shall be mixed in the required amount of water to produce a homogeneous slurry and then uniformly applied under pressure at the rate of 12.75 pounds per 1000 square feet (dry weight). When wood cellulose mulch is to be incorporated as an integral part of the slurry mix, it shall be added after the seed and fertilizer have been thoroughly mixed, and shall be applied at the rate of 23 pounds per 1000 square feet (dry weight). Lime, when applied hydraulically, shall be a single, separate operation.

Where seed is applied by hydro seeding, compacting as specified in this section may be eliminated.

3.5 MAINTENANCE

- 3.5.1 The lawn areas shall be maintained until all work on the entire contract has been completed and accepted.

- 3.5.2 Maintenance of lawn areas shall include watering, spot weeding, mowing, application of herbicides, fungicides, insecticides, and re-seeding until a full uniform stand of grass, free of weed, undesirable species, disease, and insects is achieved and accepted by the Owner.
- 3.5.3 Maintenance shall include providing protection against traffic by erecting barricades and by placing approved warning signs on the seeded areas.
- 3.5.4 Contractor shall lightly rake up and dispose of mulch material prior to initial mowing. Care will be taken to not disturb new lawn any more than necessary. Note: Disregard if area is hydro seeded.
- 3.5.5 Contractor shall mow new lawn once and dispose of excess clippings when grass reaches 2 ½ inches. Mowing height shall be 1 ½ - 2 inches.
- 3.6 ACCEPTANCE
 - 3.6.1 Inspection to determine acceptance of lawns will be made by the Owner, upon the Contractor's request. Provide notification at least 2 working days before requested inspection date.
 - 3.6.2 Lawn areas will be acceptable provided all requirements including maintenance, have been complied with, and a healthy, even colored viable lawn is established, free of weeds, undesirable grass species, disease and insects.
 - 3.6.3 Upon acceptance the Owner will assume lawn maintenance.
- 3.7 CLEANING
 - 3.7.1 Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from seeding/hydro seeding operations.

END OF SECTION 02491

SECTION 02500

PAVING, SURFACING, AND WALKS

PART 1 - GENERAL

- 1.1 Related work specified elsewhere includes the following:
 - A. Section 02200 – Earthwork
- 1.2 Reference specifications where applicable to work under this Section are referred to by abbreviation as follows:
 - A. American Association of State Highway and Transportation Officials (AASHTO)
 - B. Virginia Department of Transportation (VDOT) (Road and Bridge Specification, Latest Edition, unless otherwise specified.)
- 1.3 Establish and maintain required lines and elevations.
- 1.4 Apply tack coats only when ambient temperature is above 50 degrees, if and when temperature has not been below 35 degrees F for 12 hours immediately prior to application. Construct asphalt concrete surface course only when atmospheric temperature is above 40 degrees F and base is dry. Base course may be laid when temperature is above 30 degrees F and rising.
- 1.5 Concrete mixture for all concrete surfaces (curbs, walks, etc.) Shall be from the same supplier. Mixture shall be of natural crushed river bed stone and light Portland Cement. Cement shall be from one source or mill. Mixture and color shall be approved by the Owner's Representative.
- 1.6 Contractor shall submit shop drawings indicating locations of expansion joints and control joints in concrete paving for approval by the Owner's Representative.
- 1.7 Contractor shall submit shop drawings or product data for the following items:
 - A. Aggregate Base Course
 - B. Asphalt Surface Course
 - C. Geotextile Fabric
 - D. Gravel – VDOT #9 Stone

PART 2 - PRODUCTS

- 2.1 Aggregate base course shall be Type II, Size 21A, graded aggregate base material as defined in VDOT, Road and Bridge Specifications, “Subbase and Aggregate Base Material”.
- 2.2 Materials for use with asphalt concrete:
- A. Tack coat shall be in accordance with VDOT Specifications, Asphalt Concrete Pavement.
 - B. Asphalt concrete surface course shall be VDOT SM-9.5 or VDOT SM-12.5, as shown on plans, meeting requirements of VDOT Road and Bridge Specifications.
- 2.4 Concrete
- A. Concrete for exposed slabs shall be VDOT Specifications, Section 217, Class A-3, air-entrained.
 - C. Curing materials for concrete shall be clear and in accordance with VDOT Specifications, Section 220.
 - D. Joint materials shall be VDOT Specifications, Section 212. Expansion material shall be placed at all R/W line adjacent to buildings and or walls.
 - E. All concrete used for private property entrances shall “high-early” strength mix as approved by the Owner’s Representative.
- 2.5 Select Material:
- Select Material shall conform to VDOT specifications, Section 207.
- 2.6 Concrete joint Former:
- A. “Kold-Seal” Zip-per Strip Extension Joint Former #KSF-400-38-50, distributed by Vinylex Corp., P. O. Box 7187, Knoxville, TN 37921, (615) 690-2211 or approved equivalent.
- 2.7. Geotextile Fabric: Propex Geotex 200ST geotextile fabric, or approved equal.
- 2.8. Gravel: VDOT #9 Stone shall conform to VDOT Specifications, Section 203
- The rock source shall be crushed into irregular, angular pieces that interlock and bond into a firm matrix. The material shall retain all of its original binders. The material shall be wetted and vibratorally compacted to meet the Americans with Disability Act Accessibility Guidelines (ADAAG) for Buildings and Facilities.

PART 3 - EXECUTION

- 3.1 Subgrade Preparation: Subgrade preparation shall consist of the final machining of the subgrade immediately prior to placing the aggregate base course. The surface shall be true to line and grade. Construction methods and equipment shall conform to applicable portions of Section 305 "Subgrade and Shoulders" of VDOT Road and Bridge Specifications.
- 3.2 Aggregate base course construction methods and equipment shall conform to requirements of Section 309, "Aggregate Base Course" VDOT Road and Bridge Specifications.
- 3.3 Asphalt Concrete Pavement Construction Methods shall conform to Section 315, "Asphalt Concrete Pavement" of VDOT Road and Bridge Specifications.
 - A. Apply tack coat to contact surfaces of previously constructed asphalt or Portland Cement concrete and surfaces abutting or projected into asphalt concrete pavement. Apply at rate of 0.10 gallon per square yard of surface in accordance with VDOT Road and Bridge Specification, Section 310, "Tack Coat."
- 3.4 Asphalt concrete overlay shall consist of VDOT SM-9.5 or VDOT SM-12.5 (VDOT Road and Bridge Specifications) asphalt concrete, thickness as required to grade and tack coat. Placement of materials shall be as herein described.
- 3.5 Subgrade Preparation
 - A. The Contractor shall verify subgrade elevations and correct discrepancies before proceeding with construction.
 - B. The Contractor shall verify casting elevations and reset or adjust to meet flush with finished walk surface.
 - C. Base course shall not be placed on frozen or muddy subgrade.

END OF SECTION 02500

SECTION 02800

CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM C 94 (1994) Ready-Mixed Concrete

ASTM F 883 (2004) Padlocks

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

FS RR-F-191 (Rev K) Fencing, Wire and Post Metal (and Gates, Chain-Link Fence Fabric, and Accessories)

FS RR-F-191/1 (Rev D) Fencing, Wire and Post, Metal (Chain-Link Fence Fabric)

FS RR-F-191/2 (Rev D) Fencing, Wire and Post, Metal (Chain-Link Fence Gates)

FS RR-F-191/3 (Rev D) Fencing, Wire and Post, Metal (Chain-Link Fence Posts, Top Rails and Braces)

FS RR-F-191/4 (Rev D) Fencing, Wire and Post, Metal (Chain-Link Fence Accessories)

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCING AND ACCESSORIES

FS RR-F-191 and detailed specifications as referenced and other requirements as specified.

2.1.1 Fabric

FS RR-F-191/1, Mesh size, 2 inches. Provide selvage knuckled at both selvages. Height of fabric, as indicated.

2.1.2 Gates

FS RR-F-191/2; Type I, single swing and II, double swing. Shape and size of gate frame as indicated. Gate fabric, as specified for fencing fabric. Attach gate fabric to gate frame in accordance with manufacturer's standards, except that welding will not be permitted. Arrange padlocking latches to be accessible from both sides of gate, regardless of latching arrangement.

2.1.3 Posts, Top Rails, Bottom Rails and Braces

FS RR-F-191/3 line posts; Class 1, steel pipe, Grade A. End, corner, and pull posts; Class 1, steel pipe, Grade A. Braces and rails; Class 1, steel pipe, Grade A, in minimum sizes listed in FS RR-F-191/3 for each class and grade.

2.1.4 Fencing Accessories

FS RR-F-191/4. Provide wire ties constructed of the same material as the fencing fabric.

2.1.5 Concrete

ASTM C 94, using 3/4 inch maximum-size aggregate, and having minimum compressive strength of 2500 psi at 28 days.

2.1.6 Padlocks

ASTM F 883

PART 3 - EXECUTION

3.1 SITE PREPARATION

3.1.1 Clearing and Grading

Clear fence line of obstacles to install fencing. Establish a graded, compacted fence line prior to fencing installation. Compact fill used to establish fence line.

3.1.2 Excavation

Excavate to dimensions indicated for concrete-embedded items, except in bedrock. If bedrock is encountered, continue excavation to depth indicated or 18 inches into bedrock, whichever is less, with a diameter in bedrock a minimum of 2 inches larger than outside diameter of post. Clear post holes of loose material. Dispose of waste.

3.2 FENCE INSTALLATION

Install fence on prepared surfaces to line and grade indicated. Install fence in accordance with fence manufacturer's written installation instructions except as modified herein.

3.2.1 Post Spacing

Provide line posts spaced equidistantly apart, not exceeding 10 feet on center. Provide gate posts spaced as necessary for size of gate openings. Do not exceed 500 feet on straight runs between braced posts. Provide corner or pull posts, with bracing in both directions, for changes in direction of 15 degrees or more, or for abrupt changes in grade.

3.2.2 Post Setting

Set posts plumb. Allow concrete to cure a minimum of 72 hours before performing other work on posts.

3.2.2.1 Earth and Bedrock

Provide concrete bases of dimensions indicated. Compact concrete to eliminate voids.

3.2.3 Bracing

Brace gate, corner, end, and pull posts to nearest post with a horizontal brace used as a compression member, placed at least 12 inches below top of fence, and two diagonal truss rods and truss tighteners used as tension members.

3.2.4 Top and Bottom Rails

Install top and bottom rails before installing chain-link fabric. Pass top rail through intermediate post caps. Provide expansion coupling spaced as indicated.

3.2.5 Fabric

Pull fabric taut and secure fabric to top rail and bottom rail, close to both sides of each post and at maximum intervals of 24 inches on center. Secure fabric to posts using ties spaced 12 inches on center. Install fabric on opposite side of posts from area being secured. Install fabric so that bottom of fabric is 2 inches above ground level.

3.3 ACCESSORIES INSTALLATION

3.3.1 Post Caps

Install post caps as recommended by the manufacturer.

3.3.2 Supporting Arms

Install supporting arms as recommended by manufacturer. In addition to manufacturer's standard connections, permanently secure supporting arms to posts. Studs driven by low-velocity powder-actuated tools may be used with steel, wrought iron, ductile iron, or malleable iron. Do not use studs driven by powder-actuated tools with gray iron or other material that will fracture.

3.3.3 Gates

Install swing gates to swing through 180 degrees from closed to open.

3.3.4 Padlocks

Provide padlocks for gate openings and provide chains that are securely attached to gate or gate posts. Provide padlocks keyed alike, and provide two keys for each padlock.

3.4 CLEANUP

Remove waste fencing materials and other debris from the site.

END OF SECTION 02800

SECTION 02950

MISCELLANEOUS ITEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of the section.

1.2 SUMMARY:

This work shall consist of furnishing and installing steel bollards, pavement markings and signage as shown on the drawings, to include cement footers, yellow traffic paint and white traffic paint.

1.3 QUALITY ASSURANCE:

- A. Virginia Department of Transportation, "Road and Bridge Specifications", latest edition.
- B. AASHTO's Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.
- C. AASHTO's Standard Specifications for Bicycle Facilities 1999.

PART 2 - PRODUCTS

2.1 STEEL BOLLARDS

- A. Primer and paint shall conform to VDOT Sec.231 and 411.
- B. Portland cement shall conform to AASHTO M85 type II for class A-3 as set forth in VDOT Sec. 214 and 217.
- C. Water shall be potable (Suitable to drink).
- D. Normal Weight, Coarse and Fine Aggregates: Shall conform to VDOT Sec. 217 and ASTM C33.
- E. Steel shall conform to VDOT Sec. 226, 407, and ASTM Grade A35 and ASTM A501.

2.2 PAVEMENT MARKINGS

- A. All pavement markings shall be thermoplastic and shall conform to the VDOT Sec. 246 and where directed by the City's Traffic Engineer.

2.3 SIGNAGE

- A. Posts maybe made of steel or wood. Steel posts to be painted or galvanized. Wood posts are to be finished with a natural, water repellent finish applied in two coats as specified by manufacturer's specifications. All work shall conform to VDOT Sec. 407, 701 and the Manual on Uniform Traffic Control Devices (MUTCD), Latest Edition and the Virginia Supplement, Latest Edition, or as directed by the Chief Traffic Engineer.
- B. Primer and paint shall conform to VDOT Sec. 231 and 411.
- C. Reflective material shall conform to VDOT Sec. 247.
- D. Wood shall conform to VDOT Sec. 236.
- E. Aluminum shall conform to VDOT Sec. 229.
- F. Steel shall conform to VDOT Sec. 226, 407, 700.
- G. Galvanizing shall conform to VDOT Sec. 223.

2.4 WOOD BOLLARDS

- A. Wood shall be pressure treated lumber

PART 3 - EXECUTION

3.1 STEEL BOLLARDS:

- A. Do not begin installation until final course of S-5 has been installed and finished.
- B. Measure and cut steel pipe to finished length, allowing for extra length to grind both ends flat and smooth.
- C. Preparation, priming and finishing being in accordance with VDOT Sec. 411.04.
- D. Drill or hand excavate (using posthole digger) holes for bollards. Holes to be diameter of concrete footers. Bollard locations shown on the drawings.
- E. Excavate hole depths approximately 4" below finished grade.
- F. Setting Pipes: center and align pip in holes 12" above bottom of excavation.

- G. Protect portion of pipe above ground from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Check each Pipe for plumb. Hold in position during placement and finished operations.

3.2 PAVEMENT MARKINGS

- A. The installation of thermoplastic pavement markings shall follow the manufacture recommended installation and handling procedures and conform to VDOT Specification, Sec. 704.

3.3 SIGNAGE

- A. Install signs as indicated on the drawings.

3.4 WOOD BOLLARDS

- A. Install bollards as shown on the drawings.

END OF SECTION 02950

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes cast-in-place concrete for the following:
 - 1. Pilecaps, reinforcement and formwork.

1.2 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 301 - Specifications for Structural Concrete.
 - 2. ACI 305 - Hot Weather Concreting.
 - 3. ACI 306.1 - Standard Specification for Cold Weather Concreting.
 - 4. ACI 308.1 - Standard Specification for Curing Concrete.
 - 5. ACI 318 - Building Code Requirements for Structural Concrete.
- B. ASTM International:
 - 1. ASTM A 615, Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
 - 2. ASTM A775/ A775M – Standard Specification for Epoxy-Coated Steel Reinforcing Bars.
 - 3. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
 - 4. ASTM C33 - Standard Specification for Concrete Aggregates.
 - 5. ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 - 6. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.
 - 7. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic Cement Concrete.
 - 8. ASTM C150 - Standard Specification for Portland Cement.
 - 9. ASTM C172 - Standard Practice for Sampling Freshly Mixed Concrete.
 - 10. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
 - 11. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
 - 12. ASTM C309 – Liquid membrane forming compounds for curing concrete.
 - 13. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete.
 - 14. ASTM C595 - Standard Specification for Blended Hydraulic Cements.
 - 15. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete.
 - 16. ASTM C989 - Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars.
 - 17. ASTM C1017/C1017M - Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete.
 - 18. ASTM C1064/C1064M - Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete.
 - 19. ASTM C1107 - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).

- 20. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures.
- C. American Welding Society, Inc. (AWS)
 - 1. AWS D1.4 Structural Welding Code – reinforcing steel.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Design Data:
 - 1. Submit concrete mix design for each concrete strength. Furnish a complete list of materials including type, brand, source and amount of cement, and admixtures; applicable reference specifications, and copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified and will be suitable for the job conditions. Submit separate mix designs when admixtures are required for the following:
 - a. Hot and cold weather concrete work.
 - b. Air entrained concrete work.
 - 2. Identify mix ingredients and proportions, including admixtures.
 - 3. Identify chloride content of admixtures and whether or not chloride was added during manufacture.
- C. Manufacturer's Catalog Data:
 - 1. Material for curing concrete.
- D. Manufacturer's Installation Instructions: Submit installation procedures and interface required with adjacent Work.
- E. Shop Drawings:
 - 1. Reinforcing steel: Indicate bar sizes, spacing, locations, and quantities of reinforcing steel, bending and cutting schedules, supporting and spacing devices and epoxy coating.
- F. Certificates of Compliance:
 - 1. Aggregates
 - 2. Admixtures
 - 3. Reinforcement
 - 4. Cement

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 318.
- B. Conform to ACI 305 when concreting during hot weather.
- C. Conform to ACI 306.1 when concreting during cold weather.
- D. Acquire cement and aggregate from one source for Work.

1.5 COORDINATION

- A. Coordinate placement of utility sleeves and joint devices with erection of concrete formwork and placement of form accessories.

PART 2 PRODUCTS

2.1 CONCRETE MATERIALS

- A. Cement: ASTM C150, Cement: ASTM C150, Type II or III modified cement with a tricalcium aluminate content of 8 percent maximum.
- B. Normal Weight Aggregates: ASTM C33.
 - 1. Coarse Aggregate Maximum Size: In accordance with ACI 318.
- C. Water: ACI 318; potable.

2.2 ADMIXTURES

- A. Air Entrainment: ASTM C260.
- B. Water reducing: ASTM C494, Type A, E, or F.
- C. Chemical: ASTM C494/C494M
- D. Calcined Pozzolan: ASTM C618 Class N.
- E. Silica Fume: ASTM C1240.
- F. Slag: ASTM C989; Grade 100; ground granulated blast furnace slag.
- G. Plasticizing: ASTM C1017/C1017M Type II, plasticizing and retarding.

2.3 REINFORCEMENT

- A. Tie Wire: Minimum 16 gage annealed type.
- B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions.
- C. Special Chairs, Bolsters, Bar Supports, Spacers Adjacent to Weather Exposed Concrete Surfaces: Plastic tipped steel.
- D. Deformed Reinforcement: ASTM A615/A615M; 60 ksi yield strength, steel bars, epoxy coated.
- E. Materials for Curing Concrete:
 - 1. Impervious Sheeting: ASTM C171; waterproof paper, clear or white polyethylene sheeting, or polyethylene-coated burlap
 - 2. Pervious Sheeting: AASHTO M 182

3. Liquid Membrane-forming Compound: ASTM C309, white pigmented, Type 2, Class B.

- F. Liquid Chemical Sealer-Hardener Compound: Compound shall be magnesium fluosilicate which when mixed with water seals and hardens the surface of the concrete. Do not use on exterior slabs exposed to freezing conditions. Compound shall not reduce the adhesion of resilient flooring, tile, paint, roofing, waterproofing, or other material applied to concrete

2.4 EPOXY COATING

- A. Epoxy coating shall meet the requirements of ASTM A775/ A775M.

2.5 CONCRETE MIX

- A. Select proportions for normal weight concrete in accordance with ACI 301 Method 1.

Provide concrete to the following criteria:

Material and Property	Measurement
Compressive Strength (28 day)	4,000 psi
Cement Type	ASTM C150
Aggregate Type	Normal weight
Water-Cement Ratio (maximum)	0.45
Coarse Aggregate	No. 57 (Nominal max. aggregate size = 1 inch)
Fine Aggregate	Grade A
Air Content	6.5 percent plus or minus 1.5 percent
Pozzolan Content:	25 percent of cementitious materials by weight, maximum
Silica Fume Content:	7.5 percent of cementitious materials by weight, maximum
Slag	25 percent of cementitious materials by weight, maximum
Slump	3 inches plus or minus 1 inch

Admixtures: Include admixture types and quantities indicated in concrete mix designs only when approved by Engineer.

Use accelerating admixtures in cold weather. Use of admixtures will not relax cold weather placement requirements.

Do not use calcium chloride nor admixtures containing calcium chloride.

Use set retarding admixtures during hot weather.

Provide air entrainment admixture in all concrete.

Ready Mixed Concrete: Mix and deliver concrete in accordance with ASTM C94/C94M.

Site Mixed Concrete: Mix concrete in accordance with ACI 318.

PART 3 EXECUTION

3.1 FORMS ACI 301. Provide forms, shoring, and scaffolding for concrete placement unless indicated or specified otherwise. Set forms mortar tight and true to line and grade. Chamfer above grade exposed joints, edges, and external corners of concrete 0.75 inch unless otherwise indicated. Provide formwork with clean-out openings to permit inspection and removal of debris. Forms submerged in water shall be watertight.

- A. Coating: Before concrete placement, coat the contact surfaces of forms with a nonstaining mineral oil, nonstaining form coating compound, or two coats of nitrocellulose lacquer. Do not use mineral oil on forms for surfaces to which adhesive, paint, or other finish material is to be applied.
- B. Removal of Forms: Prevent concrete damage during form removal. After placing concrete, forms shall remain in place for three days and 60% of the 28 day compressive strength where minimum temperatures specified in paragraph, entitled "curing periods and minimum temperatures" are maintained adjacent to the concrete and formwork. The minimum time period for removal of forms shall govern where it exceeds the minimum specified curing period.

3.2 ACI 301. Provide bars, wire fabric, wire ties, supports, and other devices necessary to install and secure reinforcement. Reinforcement shall not contain rust, scale, oil, grease, clay and foreign substances that would reduce the bond. Rusting of reinforcement is a basis of rejection if the effective cross sectional area or the nominal weight per foot of the reinforcement has been reduced to less than specified in paragraph entitled "reinforcing bars." Remove loose rust prior to placing steel. Tack welding is prohibited

- A. Tolerances: Place reinforcement and secure with noncorrodible chairs, spacers, or metal hangers. Use precast concrete blocks or other noncorrodible material for supporting reinforcement on the ground.
- B. Splicing: AWS D1.4, except as otherwise indicated or specified. Splices shall be approved prior to use. Do not splice at points of maximum stress. Overlap welded wire fabric the spacing of cross wires, plus 2 inches (50 millimeters).
- C. Future Bonding: Plug exposed, threaded, mechanical reinforcement bar connectors with a greased bolt. Bolt threads shall match the connector. Countersink the connector in the concrete. Caulk the depression after the bolt is installed.
- D. Cover: ACI 301 for minimum coverage of 3-inches (75 millimeters), unless otherwise indicated.
- E. Setting Miscellaneous Material: Place and secure anchors and bolts, pipe sleeves, conduits, and other such items in position before concrete placement. Plumb anchor bolts and check location and elevation. Temporarily fill voids in sleeves with readily removable material to prevent the entry of concrete.
- F. Form Ties and Accessories: The use of wire alone is prohibited. Form ties and accessories shall not reduce the effective cover of the reinforcement

3.3 MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE: ASTM C94, ACI 301, ACI 302, and ACI 304, except as modified herein. Provide mandatory batch ticket information for each load of ready mix concrete.

- A. Measuring: Make moisture, weight, and air determination at intervals as specified in paragraph entitled "sampling and testing." Allowable tolerances for measuring cement and water shall be 1 percent; for aggregates, 2 percent; and for admixtures, 3 percent.
- B. Mixing: ASTM C94 and ACI 301. Machine mix concrete. Begin mixing within 30 minutes after the cement has been added to the aggregates. Place concrete within 90 minutes of either addition of mixing water to cement and aggregates or addition of cement to aggregates if the air temperature is less than 85 degrees F (29⁰ C). Reduce mixing time and place concrete within 60 minutes if the air temperature is greater than 85 degrees F (29⁰ C). Additional water may be added, provided that both the specified maximum slump and water-cement ratio are not exceeded. If the entrained air content falls below the specified limit, add a sufficient quantity of admixture to bring the entrained air content within the specified limits. Dissolve admixtures in the mixing water and mix in the drum to uniformly distribute the admixture throughout the batch.
- C. Transporting: Transport concrete from the mixer to the forms as rapidly as practicable. Prevent segregation or loss of ingredients. Clean transporting equipment thoroughly before each batch. Do not use aluminum pipe or chutes. Remove concrete which has segregated in transporting and dispose of as directed.
- D. Placing: Place concrete as soon as practicable after the forms and the reinforcement have been inspected and approved. Do not place concrete when weather conditions prevent proper placement and consolidation; in uncovered areas during periods of precipitation; or in standing water. Prior to placing concrete, remove dirt, construction debris, water, snow, and ice from within the forms. Deposit concrete as close as practicable to the final position in the forms. All surfaces upon which concrete is to be placed shall be thoroughly dampened. The maximum free fall of concrete during placement shall be three feet. Placement at greater heights than three feet shall be accomplished by shutes, slides, or other approved methods. Concrete shall be worked around the reinforcement and embedded fixtures and into corners of the forms with care being taken to avoid segregation. Concrete shall be placed so as to avoid formation of cold joints between successively deposited layers. Place concrete in one continuous operation from one end of the structure towards the other.
 - 1. Vibration: ACI 301. Furnish a spare vibrator on the job site whenever concrete is placed. Consolidate slabs greater than 4 inches (100 millimeters) in depth with high frequency, internal, mechanical vibrating equipment supplemented by hand spading and tamping. Consolidate concrete slabs 4 inches (100 millimeters) or less in depth by wood tampers, spading, and settling with a heavy leveling straight edge. Operate vibrators with vibratory element submerged in the concrete, with a minimum frequency of not less than 6000 impulses per minute when submerged. Do not use vibrators to transport the concrete in the forms. Insert and withdraw vibrators approximately 18 inches (450 millimeters) apart. Penetrate the previously placed lift with the vibrator when more than one lift is required. Place concrete in 18-inch maximum vertical lifts. External vibrators shall be used on the exterior surface of the forms when internal vibrators do not provide adequate consolidation of the concrete.
- E. Tolerances: Variations in concrete slab levels shall not exceed 1/8 inch (3.1 millimeters) in ten feet. Grind down high spots and fill low spots using urethane leveling materials or an approved latex underlayment adhered with a concrete bonding agent.

- F. Cold Weather: ACI 306R. Provide 50 degrees F (10° C) minimum concrete temperature. Obtain approval prior to placing concrete when the ambient temperature is below 40 degrees F (4° C) or when concrete is likely to be subjected to freezing temperatures within 24 hours. Cover concrete and provide sufficient heat to maintain 50 degrees F (10° C) minimum adjacent to both the formwork and the structure while curing. Limit the rate of cooling to 5 degrees F (2.8° C) in any one hour and 50 degrees F (10° C) per 24 hours after heat application.
- G. Hot Weather: ACI 305r. Provide and maintain required concrete temperature using figure 2.1.5 in ACI 305r to prevent the evaporation rate from exceeding 0.2 pound of water per square foot (1 kilogram of water per square meter) of exposed concrete per hour. Cool ingredients before mixing or use other suitable means to control concrete temperature and prevent rapid drying of newly placed concrete. Shade the fresh concrete as soon as possible after placing. Start curing when the surface of the fresh concrete is sufficiently hard to permit curing without damage. Provide water hoses, pipes, spraying equipment, and water hauling equipment (where worksite is remote to water source) to maintain a moist concrete surface throughout the curing period. Provide burlap cover or other suitable, permeable material with fog spray or continuous wetting of the concrete when weather conditions prevent the use of either liquid membrane curing compound or impervious sheets. For vertical surfaces, protect forms from direct sunlight and add water to top of structure once concrete is set.

3.4 SURFACE FINISHES

- A. Defects: Repair formed surfaces by removing minor honeycombs, pits greater than one square inch surface area or 0.25 inch maximum depth, or otherwise defective areas. Provide edges perpendicular to the surface and patch with nonshrink grout. Patch tie holes and defects when the forms are removed. Concrete with extensive honeycomb (including exposed steel reinforcement, cold joints, entrapped debris, separated aggregate, or other defects) which affect the serviceability or structural strength will be rejected, unless correction of defects is approved. Obtain approval of corrective action prior to repair. The surface of the concrete shall not vary more than the allowable tolerance of ACI 347. Exposed surfaces shall be uniform in appearance and finished to a smooth form finish unless otherwise specified.
- B. Not Against Forms (tops of walls): Surfaces not otherwise specified shall be finished with wood floats to even surfaces. Finish shall match adjacent finishes.
- C. Formed Surfaces:
 - 1. As-cast Smooth Form: Provide as-cast smooth form for all surfaces. Form facing material shall produce a smooth, hard, uniform texture on the concrete. Remove fins and other projections.
- D. Rubbed Finish: Provide concrete with a smooth form finish. Finish as follows:
 - 1. Smooth rubbed: Provide on newly hardened concrete within 24 hours following form removal. Wet surfaces and rub with an abrasive tool to produce uniform color and texture. Use only the cement paste drawn from the concrete rubbing process. Remove all excess cement matrix by working the surface with a rubber float, burlap or other means.
 - 2. Cork Floated On All Other Surfaces: Mix one part portland cement and one part fine sand with sufficient water to produce a stiff mortar. Dampen the surface and apply mortar with firm rubber float or trowel, filling surface voids. Compress mortar into voids using a slow speed grinder or stone. If the mortar surface dries too

rapidly to permit proper compaction and finishing, apply a small amount of water with a fog sprayer. Produce the final texture with a cork float using a swirling motion.

3.5 Surface Finish Samples: Provide a minimum of one sample concrete panel for each finish for each mix design, 3 feet (1 meter) by 3 feet (1 meter), 3 inches (75 millimeters) thick. Use the approved concrete mix design(s). Provide sample panels on-site at locations directed. Once approved, each set of panels shall be representative of each of the finishes specified and shall be representative of the workmanship and finish(es) required. Do not remove or destroy samples until directed by the Architect/Engineer.

3.6 PAVEMENT FINISHES AND MISCELLANEOUS CONSTRUCTION:

ACI 302.1R, unless otherwise specified. After troweling and moist curing are completed, apply a liquid chemical sealer-hardener compound on interior floor slabs that do not receive floor covering or protective coating.

A. Finish: Place, consolidate, and immediately strike off concrete to obtain proper contour, grade, and elevation before bleed water appears. Permit concrete to attain a set sufficient for floating and supporting the weight of the finisher and equipment. If bleedwater is present prior to floating the surface, drag the excess water off or remove by absorption with porous materials. Do not use dry cement to absorb bleedwater.

1. Floated: Provide for joist bearings and other exterior slabs where not otherwise specified. Float the surface by hand with a wood or magnesium float, or use a power-driven float. Floating of any one area shall be the minimum necessary to produce an even finish, level within 1/4 inch (6 millimeters) in 10 feet for exterior work.

2. Broomed: Provide for exterior walks, platforms, patios, and ramps, unless otherwise indicated. Provide a floated finish, then finish with a flexible bristle broom. Permit surface to harden sufficiently to retain the scoring or ridges. Broom transverse to traffic or at right angles to the slope of the slab.

B. Concrete Walks: Provide 4 inches (100 millimeters) thick minimum. Provide contraction joints spaced every 5 linear feet (1.5 meters) unless otherwise indicated. Cut contraction joints 3/4 inch (19 millimeters) deep with a jointing tool after the surface has been finished. Provide 1/2 inch (12.5 millimeters) thick transverse expansion joints at changes in direction where sidewalk abuts curb, steps, rigid pavement, or other similar structures; space expansion joints every 50 feet (15 meters) maximum apart. Provide walks with a broomed finish. Provide a transverse slope of 1/4 inch (18 millimeters) per foot (meter). Limit variations in cross section to 1/4 inch (6 millimeters) in 5 feet (1.5 meters).

3.6 CURING AND PROTECTION: ACI 301 unless otherwise specified. Begin curing immediately following form removal. Protect concrete from injurious action by sun, rain, flowing water, frost, mechanical injury, tire marks, and oil stains. Do not allow concrete to dry out from time of placement until the expiration of the specified curing period. Do not use membraneforming compound on surfaces where appearance would be objectionable, on any surface to be painted, where coverings are to be bonded to the concrete, or on concrete to which other concrete is to be bonded. If forms are removed prior to the expiration of the curing period, provide another curing procedure specified herein for the remaining portion of the curing period. Provide moist curing for those areas receiving liquid chemical sealerhardener.

A. Moist Curing: Provide for the removal of water without erosion or damage to the structure.

1. Ponding or Immersion: Continually immerse the concrete throughout the curing period. Water shall not be more than 20 degrees F (11⁰ C) less than the temperature of the concrete. For temperature between 40 and 50 degrees F (4 to 10⁰ C), increase the curing period by 50 percent.
 2. Fog Spraying or Sprinkling: Provide uniform and continuous application of water throughout the curing period. For temperature between 40 and 50 degrees F (4 to 10⁰ C), increase the curing period by 50 percent.
 3. Pervious Sheeting: Completely cover surface and edges of the concrete with two thicknesses of wet sheeting. Overlap sheeting 6 inches over adjacent sheeting. Sheeting shall be at least as long as the width of the surface to be cured. During application, do not drag the sheeting over the finished concrete nor over sheeting already placed. Wet sheeting thoroughly and keep continuously wet throughout the curing period.
 4. Impervious Sheeting: Wet the entire exposed surface of the concrete thoroughly with a fine spray of water and cover with impervious sheeting throughout the curing period. Lay sheeting directly on the concrete surface and overlap edges 12 inches (300 millimeters) minimum. Provide sheeting not less than 18 inches (450 millimeters) wider than the concrete surface to be cured. Secure edges and transverse laps to form closed joints. Repair torn or damaged sheeting or provide new sheeting. Cover or wrap columns, walls, and other vertical structural elements from the top down with impervious sheeting, overlap and continuously tape sheeting joints, and introduce sufficient water to soak the entire surface prior to completely enclosing.
- B. Liquid Membrane Forming Compound Curing: Seal or cover joint openings prior to application of curing compound. Prevent curing compound from entering the joint. Provide and maintain compound on the concrete surface throughout the curing period. Do not use this method of curing where the use of figure 2.1.5 in ACI 305R indicates that hot weather conditions will cause an evaporation rate exceeding 0.2 pound (0.97 kg) of water per square foot (meter) per hour.
1. Application: Unless the manufacturer recommends otherwise, apply compound immediately after the surface loses its water sheen and has a dull appearance, and before joints are sawed. Mechanically agitate curing compound thoroughly during use. Use approved power spraying equipment to uniformly apply two coats of compound in a continuous operation. The total coverage for the two coats shall be 200 square feet (4.9 square meters) maximum per gallon (liter) of undiluted compound unless otherwise recommended by the manufacturer's written instructions. The compound shall form a uniform, continuous, coherent film that will not check, crack, or peel. Immediately apply an additional coat of compound to areas where the film is defective. Respray concrete surfaces subjected to rainfall within 3 hours after the curing compound application.
 2. Protection of Treated Surfaces: Prohibit foot and vehicular traffic and other sources of abrasion for not less than 72 hours after compound application. Maintain continuity of the coating for the entire curing period and immediately repair any damage.

- C. Liquid Chemical Sealer-Hardener: Apply sealer-hardener to interior floors not receiving floor covering. Apply the sealer-hardener in accordance with manufacturer's recommendations. Seal or cover joints and openings in which joint sealant is to be applied as required by the joint sealant manufacturer. The sealer-hardener shall not be applied until the concrete has been moist cured and has aged for a minimum of 30 days. Apply a minimum of 2 coats of sealer-hardener.
- D. Curing Periods and Minimum Temperatures: After placing concrete, maintain air temperature adjacent to the concrete at 50 degrees F (10⁰ C) minimum for the remainder of the specified time period.

<u>Time Period</u> (Days Minimum)	<u>Concrete Structure or Cement Type</u>
3	ASTM C150, type III concrete not specified otherwise.
7	ASTM C150, Type I or II.
10	Retaining walls that will be subjected to frost action or similar deteriorating conditions; pavement not under a roof.

1. Additional Curing: Double the required curing period if either one of the average of both 7-day test cylinders indicate less than 90 percent of the strength specified (f'c).

3.7 SAMPLING AND TESTING

- A. Sampling: ASTM C172. Collect samples of fresh concrete to perform tests specified. ASTM C31 for making test specimens.
- B. Testing:
1. Slump Tests: ASTM C143. Take concrete sample during concrete placement. The maximum slump may be increased as specified with the addition of an approved admixture provided that the water cement ratio is not exceeded. Perform tests when strength test cylinders are made.
 2. Temperature Tests: Test the concrete delivered and the concrete in the forms. Perform tests in hot or cold weather conditions (below 50 degrees F (10⁰ C) and above 80 degrees F (27⁰ C)) whenever test cylinders and slump tests are made.
 3. Compressive Strength Tests: ASTM C39. Make five test cylinders for each set of tests in accordance with ASTM C31. Test two cylinders at 7 days, two cylinders at 28 days, and hold one cylinder in reserve. Samples for strength tests of concrete placed each day shall be taken not less than once from every concrete truck load. Each strength test result shall be the average of two cylinders from the same concrete sample tested at 28 days. If the average of any three consecutive strength test results in less than f'c or if any strength test result falls below f'c by more than 500 psi take a minimum of three ASTM C42 core samples from the in place work represented by the low test cylinder results and test. Concrete represented by core test shall be considered structurally adequate if the average of three cores is equal

to at least 85 percent of f'_c and if no single core is less than 75 percent of f'_c . Locations represented by erratic core strengths shall be retested. Remove concrete not meeting strength criteria and provide new acceptable concrete. Repair core holes with nonshrink grout. Match color and finish of adjacent concrete. The testing of the cylinders is to be accomplished by an approved, competent, independent testing laboratory. Complete certified reports shall be furnished the engineer in triplicate. The contractor shall furnish the necessary labor, material and facilities for making, storing, curing and testing of the sample standard test cylinders. The contractor shall notify the engineer 24 hours prior to placing concrete and all placing of concrete and making of the concrete test cylinders shall be done in the presence of the engineer or his representative.

Air Content: ASTM C173 or ASTM C231 for normal weight concrete. Test air entrained concrete for air content at the same frequency as specified for slump tests

END OF SECTION

SECTION 05 50 00

MISCELLANEOUS METAL

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. Metal fabrications include items made from iron, steel, aluminum, or other metal shapes, plates, bars, strips, tubes, pipes and castings that are not specified elsewhere.
- B. Extent of metal fabrications is indicated on the drawings or as required to complete the work.
- C. The work includes all labor, materials, tools, equipment, supplies, services; and related work for the construction necessary provided complete and ready for operations.
- D. Related work specified elsewhere includes:
 - 1. Section 06 13 33 – Pier Timberwork

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

- A. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
 - 1. AISC - Manual of Steel Construction 13th Edition
- B. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
 - 1. ASTM A 53 - Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless
 - 2. ASTM A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
 - 3. ASTM A 307 - Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength
 - 4. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
 - 5. ASTM A 563 - Carbon and Alloy Steel Nuts
 - 6. ASTM F 844 - Washers, Steel, Plain (Flat), Unhardened for General Use
- C. AMERICAN WELDING SOCIETY (AWS)
 - 1. AWS A2.4 - Standard Symbols for Welding, Brazing and Nondestructive Examination
 - 2. AWS D1.1 - Structural Welding Code – Steel

1.3 TYPES OF WORK

Types of work in this section include metal fabrication for:

- A. Miscellaneous metal fabrications.

PART 2 - PRODUCTS

2.1 FERROUS METALS

- A. Metal Surfaces, General: For fabrication of miscellaneous metal work which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled names and roughness.
- B. Structural steel Shapes: ASTM A36 (Hot Dipped Galvanized).(Minimum)
- C. Steel Plates and Bars: ASTM A 36. (Hot Dipped Galvanized)
- D. Nuts: ASTM A 563, Grade and Style for applicable ASTM bolt standard specified.
- E. Washers: ASTM F 844
- F. Bolts: ASTM A307
- G. Provide ASTM A123 (Hot-Dip Galvanized) steel fasteners for all work unless otherwise shown or specified

PART 3 - EXECUTION

3.1 FABRICATION, GENERAL

- A. Workmanship: Use materials of size and thickness indicated, or if not indicated, as required to produce strength and durability in finished product for use intended. Work to dimensions indicated or accepted, using proven details of fabrication and support. Use type of materials indicated or specified for various components of work.
- B. Fabrication and assembly shall be done in the shop to the greatest extent possible.
- C. Cut, reinforce, drill and tap miscellaneous metal work as indicated to receive finish hardware and similar items.
- D. Fabricate joints that will be exposed to weather in a manner to exclude water or provide weep holes where water may accumulate.
- E. Provide miscellaneous steel framing and supports that are not a part of structural steel framework, as required to complete work.
- F. Where dissimilar metals are in contact, where aluminum is in contact with concrete, mortar, masonry, or absorptive materials subject to wetting, the surfaces shall be protected with two coats of aluminum pigmented bituminous paint.

3.2 INSTALLATION

- A. Expansion Anchor Installation
General: In general, install expansion anchors in strict accordance with manufacturer's instructions and in accordance with the following:
 - 1. Drilling holes: Use rotary hammer type drill and make drill holes to the required diameter and depth as consistent with anchor manufacturer's instructions for size of anchors being installed.

2. Minimum Embedment: Embed expansion anchors to four and one half bolt diameters, unless otherwise indicated on Drawings.
- B. Adhesive Anchor Installation:
- General: In general, install adhesive anchors in strict accordance with manufacturer's instructions and in accordance with the following:
1. Drilling Holes: Use rotary hammer type drill and make drill holes to the required diameter and depth as consistent with anchor manufacturer's instructions for size of anchors being installed.
 - a. Prior to setting cartridge and anchor stud, clean drilled holes free of loose material by vacuum process, finishing with a blast of compressed air, and cover hole until actual use.
 2. Anchor Rod installation: following cartridge installation is in prepared drill holes, set anchor rod to the required depth. Set anchor rod truly perpendicular (normal) to the base plate of item being anchored.
 3. Minimum embedment shall be in accordance with manufacturer's instructions unless otherwise noted on drawings.

3.2 FIELD MEASUREMENTS

- A. Take field measurements prior to fabrication, where possible. Do not delay job progress; allow for trimming and fitting where taking field measurements before fabrication might delay work.
- B. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, such as concrete inserts, sleeves, anchor bolts and miscellaneous items having integral anchors, which are to be embedded in concrete or masonry construction. Coordinate delivery of such items to project site.

3.3 TOUCH-UP PAINTING

Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paints, and paint exposed areas with same material as used for shop painting. Apply by brush or spray to provide a minimum dry film thickness of 2.0 mils.

-End of Section-

SECTION 06 13 33

TIMBERWORK

PART I - GENERAL

1.1 REFERENCES:

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

1. AWPA C2: Lumber, Timber, Bridge Ties and Marine Ties – Preservative Treatment by Pressure Processes
2. AWPA M4: Care of Preservative-Treated Wood Products
3. AWPA M6: Brands Used on Forest Products
4. AWPA P5: Waterborne Preservatives

ASTM INTERNATIONAL (ASTM)

1. ASTM A 123 /A 123M: Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
2. ASTM A 153/A 153M: Zinc Coating (Hot-Dip) on Iron and Steel Hardware
3. ASTM A 307: Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength

1.2 SUBMITTALS:

The following shall be submitted:

- A. SD-06 Test Reports
1. Timber preservative inspection
 2. Delivery inspection list
- B. SD-07 Certificates
1. MSDS and CIS

1.3 DELIVERY AND STORAGE

- A. Open-stack timber and lumber material on skids at least 12 inches above ground, in a manner that will prevent warping and allow shedding of water. Close-stack treated timber

and lumber material in a manner that will prevent long timbers or preframed material from sagging or becoming crooked. Keep ground under and within 5 feet of such piles free of weeds, rubbish, and combustible materials. Protect materials from weather. Handle treated timber with ropes or chain slings without dropping, breaking outer fibers, bruising, or penetrating surface with tools. Do not use cant dogs, peaveys, hooks, or pike poles. Protect timber and hardware from damage.

1.4 QUALITY ASSURANCE

A. MSDS and CIS

1. Provide Material Safety Data Sheets (MSDS) and Consumer Information Sheets (CIS) associated with timber pile preservative treatment. Contractor shall comply with all safety precautions indicated on MSDS and CIS.

B. Timber Preservative Inspection

1. Submit the inspection report of an independent inspection agency, for approval by the Owner's Representative that offered products complying with applicable AWPAs Standards. Identify treatment on each piece by the quality mark of an agency accredited by the Board of Review of the American Lumber Standard Committee.

C. Delivery Inspection List:

1. Field inspect and submit a verification list of each treated timber member and each strapped bundle of treated lumber indicating the wording and lettering of the quality control markings, the species and the condition of the wood. Do not incorporate materials damaged in transport from plant to site. Inspect all preservative-treated wood, visually to ensure there are no excessive residual materials or preservative deposits. Material shall be clean and dry or it will be rejected due to environmental concerns.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Lumber and Timbers

1. Solid Sawn

- a. Provide solid sawn lumber and timbers of stress-rated Southern Pine or with a stress rating as indicated, and identified by the grade mark of Southern Pine Inspection Bureau using the specific grading requirements as covering the species used. Use commercial grade lumber for secondary members such as decking and railings.

2. Preservative Treatment

- a. Fabricate lumber and timbers before preservative treatment. Each piece of treated lumber or timber shall be branded, by the producer, in

accordance with AWP M6. Treat wood as described on contract documents.

B. Hardware

1. Bolts with necessary nuts and washers, timber connectors, drift pins, dowels, nails, screws, spikes, O.G. washers, and other fastenings. Bolts and nuts shall be galvanized in accordance with ASTM A153. Provide plate or cut washers where indicated. Provide bolts with washers under nut and head. Provide timber connectors and other metal fastenings of type and size shown.

D. Zinc-Coating

1. Galvanized steel specified or indicated by the hot-dip process in accordance with ASTM A 123/A 123M or ASTM A 153/A 153M, as applicable.

PART 3 - EXECUTION

3.1 CONSTRUCTION

- A. Cut, bevel, and face timbers prior to plant preservative treatment. Provide protective equipment for personnel fabricating, field treating, or handling materials treated with water-borne salts. Refer to paragraph entitled "MSDS and CIS."

B. Framing

1. Cut and frame lumber and timber so that joints will fit over contact surface. Secure timbers and piles in alignment. Open joints are unacceptable. Bore holes for drift pins and dowels with a bit 1/16 inch less in diameter than the pin or dowel. Bore holes for truss rods or bolts with a bit 1/16 inch larger in diameter than rod or bolt. Bore holes for lag screws in two parts. Make lead hole for shank the same diameter as shank. Make lead hole for the threaded portion approximately two-thirds of the shank diameter. Bore holes in small timbers for boat or wire spikes with a bit of the same diameter or smallest dimension of the spike to prevent splitting. Counterbore for countersinking wherever smooth faces are indicated or specified.

C. Pilecaps/Clamps

1. Prior to placing caps, prepare tops of posts or piles as indicated on drawings. Place timber caps to secure bearing over tops of supporting posts or piles and to secure even alignment of their ends. Secure caps as indicated on drawings.

D. Stringers

1. Place crown up and, if possible, the better edge of deck stringers down. Tops of stringers shall not vary from a plane more than will permit bearing of the floor on stringers. Butt-joint and splice outside stringers, but lap interior stringers to take bearing over full width of cap or floor beam at each end. Toenail or drift bolt stringers as indicated. Stringers may be of sufficient length to cover two spans, except on sharp horizontal curves. Between stringers, frame and toenail cross-

bridging or solid-bridging at each end with at least two nails for cross-bridging and four nails for solid-bridging. Make size and spacing of bridging as indicated.

E. Decking

1. Make decking of a single thickness of plank supported by stringers or joists. Unless otherwise indicated, lay plank with heart side down and with tight joints. Screw each plank to each joist or nailing strip with at least two #12 screws. Provide screws at least 3 inches greater than the thickness of plank. Place screws at least 2 ½ inches from edges of the plank. Cut ends of planks parallel to center line of pier. Grade planks as to thickness and lay so that adjacent planks vary less than 1/16 inch.

F. Railing/Guard

1. Provide railing/guard as indicated on drawings.

G. Fastening

1. Vertical bolts shall have nuts on the lower end. Where bolts are used to fasten timber to timber, timber to concrete, or timber to steel, bolt members together when they are installed and retighten immediately prior to final acceptance of contract. Provide bolts having sufficient additional threading to provide at least 3/8 inch per foot thickness of timber for future retightening.

3.2 FIELD TREATMENT

A. Timberwork

1. Field treat cuts, bevels, notches, refacing and abrasions made in the field in treated piles or timbers in accordance with AWPA M4, MSDS and CIS. Wood preservatives are restricted use pesticides and shall be applied according to applicable standards. Trim cuts and abrasions before field treatment. Paint depressions or openings around bolt holes, joints, or gaps including recesses formed by counterboring, with preservative treatment used for piles or timber.

B. Galvanized Surfaces

1. Repair and recoat zinc coating which has been field or shop cut, burned by welding, abraded, or otherwise damaged to such an extent as to expose the base metal. Thoroughly clean the damaged areas by wire brushing and remove traces of welding flux and loose or cracked zinc coating prior to painting. Paint cleaned area with two coats of zinc oxide-zinc dust paint conforming to MIL-P-21035. Compound paint with a suitable vehicle in a ratio of one part zinc oxide to four parts zinc dust weight.

-END OF SECTION-

SECTION 31 62 19

TIMBER PILES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Wood piles.
 - 2. Preservative treatment.
- B. Related Sections:
 - 1. Section 06 13 33 – Pier Timberwork.

1.2 MEASUREMENT AND PAYMENT

- A. Test Piles:
 - 1. Test piles will be measured in linear feet from the tip to the head of the pile . The price shall include furnishing labor, materials, tools, equipment, and incidentals required for furnishing and driving test piles. Work includes furnishing and driving test piles, jetting, spudding, predrilling, disposing of pile cutoffs, redriving, and removal and replacement of damaged, mislocated, or otherwise rejected piles. Base bids on the number of test piles with pile length from tip to head of the pile as indicated on Contract Drawing. When a pile used in a driving test is incorporated in the completed structure at the required location, no separate measurement of the pile will be made for payment. This price shall include performing the test; furnishing, removing, and disposing of piles; and restoring the pile hole when the pile is not incorporated in the structure.
- B. Production Piles:
 - 1. For production piles, payment will be measured in linear feet from the tip to cutoff. The price shall include furnishing labor, materials, tools, equipment, and incidentals required for furnishing and driving piles. Work includes furnishing and driving piles, jetting, spudding, predrilling, disposing of pile cutoffs, redriving, and removal and replacement of damaged, mislocated, or otherwise rejected piles. Base bids on the number of piles with pile length from tip to cutoff, as indicated on Contract Drawing, and on total length of piling from tip to cutoff. From data obtained as a result of driving the test piles specified above, the owner will determine and list for the Contractor the calculated minimum pile tip elevations, the driving resistance for piles, or both. The information will be given to the Contractor no later than 14 calendar days after receipt of complete test pile data. The list shall be used as the basis for ordering piles. The Contractor shall not order production piles prior to receipt of the above information from the Owner. If the owner requires an increase or a decrease in the linear footage of piles furnished and installed, the contract price will be adjusted in accordance with the applicable provisions of the Contract.

1.3 REFERENCES

- A. ASTM International:
 - 1. ASTM D25 - Standard Specification for Round Timber Piles.

2. ASTM D245 - Standard Practice for Establishing Structural Grades and Related Allowable Properties for Visually Graded Lumber.
 3. ASTM D1760 - Standard Specification for Pressure Treatment of Timber Products.
- B. American Wood-Preservers' Association:
1. AWWA C3 - Piles - Preservative Treatment by Pressure Process.
 2. AWWA M4 - Standard for the Care of Preservative-Treated Wood Products.

1.4 PERFORMANCE REQUIREMENTS

- A. Drive piles as indicated on Drawings and in accordance with Geotechnical Engineer's recommendations.

1.5 SUBMITTALS

- A. Project Record Documents: Accurately record the following:
1. Sizes, lengths, and locations of piles.
 2. Driving Equipment and Sequence of driving.
 3. Pile Caps
 4. Number of blows per foot for entire length of piles and measured set for last 10 blows.
 5. Drilling: Hole diameters, start and tip elevations.
 6. Final tip and head elevations.
 7. Driving force of each hammer blow.
 8. Test Piles and production pile records. Submit pile Driving records with 15 calendar days after completion of driving.

1.6 QUALIFICATIONS

- A. Installer: Company specializing in performing work of this section with minimum 3 years documented experience.

1.7 PRODUCTS

1.8 MATERIALS

- A. Piles: ASTM D25, southern pine, one piece, non-spliced, friction type.
- B. Treatment: AWWA C3; preservative treated pressure impregnated water-borne preservatives for coastal water piles to a net retention as shown on the drawings.
- C. Dimensions:
1. Length: As indicated on Drawings.
 2. Minimum Butt circumference measured 3 feet from the end: 38 inches.
 3. Minimum Tip Diameter: 7 inches or as specified in ASTM D25.

1.9 SOURCE QUALITY CONTROL

- A. Grade piles in accordance with ASTM D245.

PART 2 EXECUTION

2.1 PREPARATION

- A. Use driving method which will not cause damage to nearby structures.
- B. Protect structures near the Work, from damage.
- C. Prepare to place piles from existing site elevations.

2.2 TEST PILES

- A. Provide test piles conforming to requirements for job piles. Drive test piles in the same manner as specified for job piles. Furnish test piles a minimum of 5 feet longer than length specified for job piles and drive the additional depth, if directed. Drive test piles in locations indicated or as directed. Record driving data.

2.3 INSTALLATION

- A. Protect pile head during driving, with full bearing on pile butt for even distribution of hammer blow.
- B. Deliver hammer blows to central axis of pile.
- C. When driving is interrupted before refusal, drive an additional 12 inches before resuming recording of performance data.
- D. Re-drive piles which have lifted due to driving adjacent piles, or by soil uplift.
- E. Do not damage piles during driving operations.
- F. Cut off tops of piles to elevations indicated and prepare pile top to receive clamps.
- G. Prevent surface damage to treated piles.
- H. Apply preservative to exposed ends of cut-off piles in accordance with AWP M4.
- I. Restrike piles when directed to do so by the Owner, Owner's Representative, or Engineer.
- J. Records: Keep a complete and accurate record of each pile driven. Indicate pile location, deviations from design location, diameter, original length, mudline elevation, tip elevation, cutoff elevation, penetration in blows per foot for entire length of penetration for test piles, penetration in blows per foot for the last 10 feet for job piles, hammer data including rate of operation, make, and size, and unusual pile behavior or circumstances experienced during driving such as re-driving, heaving, weaving, obstructions, jetting, spudding, predrilling, and unanticipated interruptions. Preprinted forms for recording pile driving data are attached below. Make pile driving records available to the Owner at the job site, a minimum of 24 hours after each day of pile driving. Include in the construction records the wood species, preservative type, retention, and producer of installed treated timber.

2.4 ERECTION TOLERANCES

- A. Maximum Variation From Vertical For Plumb Piles: 1 in 48.
- B. Maximum Variation From Design Cut-off Elevation: 3 inches.
- C. Maximum Out-of-Position: 2 inches.

2.5 FIELD QUALITY CONTROL

- A. Test Piles: Same diameter and type as specified for other piling, placed in same manner.
- B. Accepted test piles may be used in the Work.
- C. Unacceptable Piles: Piles that fail tests, are placed out of position, are below cut-off elevations, or are damaged.
- D. Provide additional piles or replace piles to conform to specified requirements.
- E. Provide full time inspection during pile driving. Do not drive piles unless inspector is present.

PILE DRIVING LOG

CONTRACT NO. _____ CONTRACT NAME _____
 CONTRACTOR _____ TYPE OF PILE _____
 PILE LOCATION _____ PILE SIZE: BUTT/TIP: _____ LENGTH GROUND _____
 GROUND ELEVATION _____ CUT OFF ELEVATION _____
 PILE TIP ELEVATION _____ VERTICAL (_____) BATTER __ ON (_____)
 SPLICES ELEVATION _____ COMPANY _____

HAMMER: MAKE & MODEL _____ WT. RAM _____
 STROKE _____ RAM RATED ENERGY _____
 DESCRIPTION & DIMENSIONS OF DRIVING CAP _____
 CUSHION MATERIALS & THICKNESS _____

INSPECTOR _____

"DEPTH" COLUMN OF PILE DRIVING RECORD REFERENCED TO:

_____ CUT-OFF ELEVATION
 _____ FINISH FLOOR ELEVATION

TIME. START DRIVING _____ FINISH DRIVING _____ DRIVING TIME _____
 INTERRUPTIONS (TIME, TIP ELEV. & REASON) _____
 JET PRESSURE & ELEVATIONS _____

DRIVING RESISTANCE

DEPTH FT.	NO. OF BLOWS	DEPTH FT.	NO. OF BLOWS	DEPTH FT.	NO. OF BLOWS
0	_____	18	_____	36	_____
1	_____	19	_____	37	_____
2	_____	20	_____	38	_____
3	_____	21	_____	39	_____
4	_____	22	_____	40	_____
5	_____	23	_____	41	_____
6	_____	24	_____	42	_____
7	_____	25	_____	43	_____
8	_____	26	_____	44	_____
9	_____	27	_____	45	_____
10	_____	28	_____	46	_____
11	_____	29	_____	47	_____
12	_____	30	_____	48	_____
13	_____	31	_____	49	_____
14	_____	32	_____	50	_____
15	_____	33	_____	51	_____
16	_____	34	_____	52	_____
17	_____	35	_____	53	_____

PILE DRIVING LOG

54	_____	77	_____	99	_____
55	_____	78	_____	100	_____
56	_____	79	_____	101	_____
57	_____	80	_____	102	_____
58	_____	81	_____	103	_____
59	_____	82	_____	104	_____
60	_____	83	_____	105	_____
61	_____	84	_____	106	_____
62	_____	85	_____	107	_____
63	_____	86	_____	108	_____
64	_____	87	_____	109	_____
65	_____	88	_____	110	_____
66	_____	89	_____	111	_____
67	_____	90	_____	112	_____
68	_____	91	_____	113	_____
69	_____	92	_____	114	_____
70	_____	93	_____	115	_____
71	_____	94	_____	116	_____
72	_____	95	_____	117	_____
73	_____	96	_____	118	_____
74	_____	97	_____	119	_____
75	_____	98	_____	120	_____
76	_____				

DRIVING RESISTANCE IN BLOWS PER INCH FOR LAST FOOT OF PENETRATION:
 DEPTH _____ DEPTH _____

1" _____ 2" _____ 3" _____ 4" _____ 5" _____ 6" _____ 7" _____ 8" _____ 9" _____ 10" _____ 11" _____ 12" _____

ELEV. _____ ELEV. _____

REMARKS _____

CUT OFF ELEVATION: FROM DRAWING _____

TIP ELEVATION = GROUND ELEVATION - DRIVEN DEPTH = _____

DRIVEN LENGTH = CUT OFF ELEVATION - TIP ELEVATION = _____

CUT OFF LENGTH = PILE LENGTH - DRIVEN LENGTH = _____

SHEET 2 OF 2

END OF SECTION

APPENDIX A
GEOTECHNICAL
REPORT

REPORT OF GEOTECHNICAL EXPLORATION

ELIZABETH RIVER TRAIL BIKEPATH/PEDESTRIAN BRIDGE Norfolk, Virginia

prepared for
Liberty Engineering, P.C.
Virginia Beach, Virginia



CONSULTING ENGINEERS

GeoEnvironmental Resources, Inc.

Environmental • Groundwater • Hazardous Materials • Geotechnical • Industrial

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VIRGINIA BEACH, VIRGINIA 23452
(757) 463-3200 FAX (757) 463-3080



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GeoEnvironmental Resources, Inc.

Environmental • Groundwater • Hazardous Materials • Geotechnical • Industrial

Wednesday, April 26, 2006

Liberty Engineering, P.C.

4521 East Honeygrove Road
Suite 108
Virginia Beach, VA 23455-6002

Attention: **Jan M. Harris, P.E.**

Subject: **Report of Geotechnical Exploration**
Elizabeth River Trail Bikepath/Pedestrian Bridge
Norfolk, Virginia
GER Project No. 110-4144

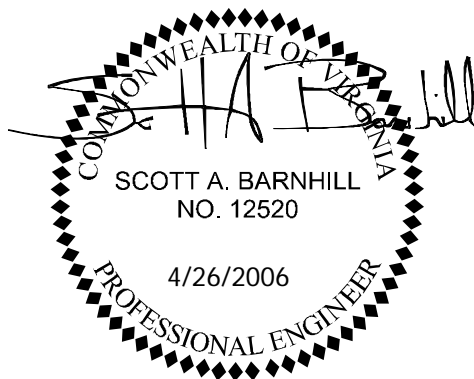
GeoEnvironmental Resources, Inc. is pleased to present this report of geotechnical exploration for the proposed Elizabeth River Trail Bikepath/Pedestrian Bridge in Norfolk, Virginia. These services were performed in accordance with our Proposal P05-110-3486A.

We appreciate the opportunity to serve as your geotechnical consultant on this project and trust that you will contact us at your convenience with any questions you may have concerning this report or the project in general.

Sincerely,
GeoEnvironmental Resources, Inc.

Charles F. P. Crawley, III, P.E.
Geotechnical Group Manager

Scott A. Barnhill, P.E.
Executive Vice President



Section 1

Report

Section 2

Drawings

Section 3

Soil Test Borings

Section 4

Laboratory Testing

Section 5

Procedures



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Environmental • Groundwater • Hazardous Materials • Geotechnical • Industrial

REPORT OF GEOTECHNICAL EXPLORATION

ELIZABETH RIVER TRAIL BIKEPATH/PEDESTRIAN BRIDGE

Norfolk, Virginia

GER Project 110-4144

Executive Summary

- ❑ The subsurface soils encountered in the 30-foot deep borings were composed of interlayered very soft to firm silty and organic clays with very loose to firm silty and clayey sands.
- ❑ The proposed structures should be supported by driven timber piles that achieve embedment to an elevation of -30 feet, msl. Ultimate compressive pile capacities ranged from 18 to 30 tons per pile depending on boring location.

Purpose of Exploration

The purpose of this exploration was to evaluate general subsurface conditions at specific locations along the planned bridge alignment. Geotechnical recommendations for design and construction of the project foundations are provided based on analysis of the field and laboratory data obtained.

Project Information

The project site is located near the end of Redgate Avenue along the entrance to Norfolk Southern's Lamberts Point Yard in Norfolk, Virginia, as shown in Figure 1 and Drawing 1. The proposed project is a bikepath/pedestrian bridge for the proposed extension of the Elizabeth River Trail. We understand the bridge will be a timber structure approximately 12 feet wide and 200 feet long in a curved alignment. It will span over a tidal marsh and will include a bird watching platform. Compressive pile capacities of about 5 to 11 tons per pile are expected to be required.

Site Conditions

The project site is a combination of wooded and brushed uplands and marsh, as shown in Figure 2. Ground elevations were about 10 feet, msl, at the highest ground on the USGS Norfolk North Topographic Map. We estimated elevations at boring locations based on visual observations.

Subsurface Conditions

Subsurface conditions along the planned alignment were explored with 3 standard soil test borings drilled to a depth of 230 feet below the ground surface. Boring locations, shown in Figure 3 and Drawing 3, and the boring depths were selected by **GER**. Drilling and sampling was conducted in accordance with the procedures in Section 5 of this report.

The subsurface conditions encountered at the boring locations are shown on the test boring records in Section 3 of this report. The test boring records represent our interpretation of the subsurface conditions based on visual examination of field samples obtained and selected laboratory classification testing. The lines designating the interface between various strata on the boring records represent the approximate interface location. In addition, the transition between strata may be gradual. Water levels shown represent the conditions only at the time of the field exploration.

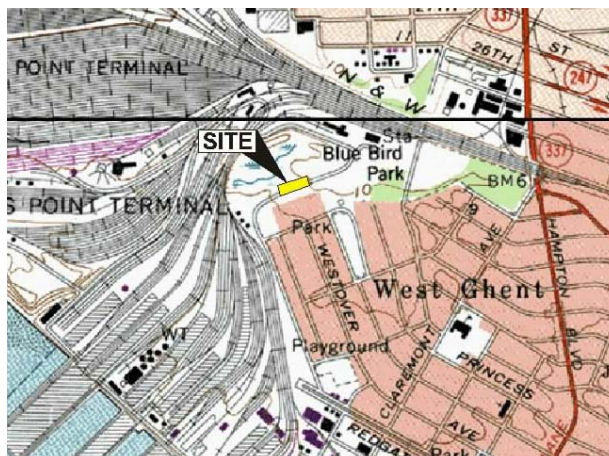


Figure 1. Site Location



Figure 2. Site Conditions

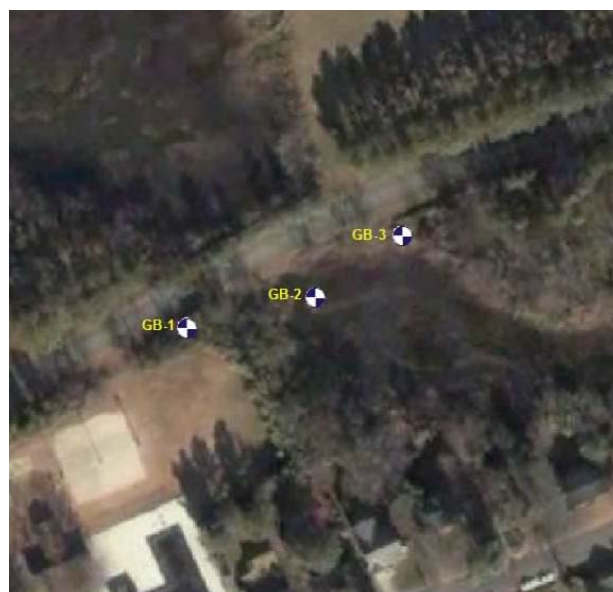


Figure 3. Boring Locations

Elevations shown on the boring records were obtained estimating elevations as compared from USGS topographic map and should be considered very approximate.

Standard penetration tests were conducted in the borings at discreet intervals in general accordance with ASTM D 1586. Small disturbed samples were obtained during the test and were used to classify the soil. The resistances also provide a general indication of soil strength and compressibility.

Stratigraphy

Subsurface conditions encountered in the borings were composed of two general stratigraphic layers. Figure 4 and Drawing 3 show a representation of the subsurface conditions encountered. Variations between these estimated profiles and the actual subsurface conditions can be expected.

STRATUM 1 consisted of interlayered very loose to loose *SAND* with varying amounts of silty and clay, *marsh deposits* composed of very soft silty and organic *CLAY*, and very soft to firm silty *CLAY*. More competent sands and clays were encountered in the upper soils at the abutment locations. SPT resistances ranged from 0 to 8 blows per foot with the marsh deposits usually 0 bpf. Unconfined compression testing and empirical correlations with Atterberg Limits indicate these clays have an undrained shear strength of 400 psf.

STRATUM 2 consisted of loose to firm, silty, fine to medium grained *SAND (SM)*. This layer was not encountered in Boring GB-1 due to elevation differences and extended to the maximum depth of the exploration of -29 feet, msl. SPT resistances ranged from 10 to 12 blows per foot. We estimate that these sands have an angle of internal friction of about 30°.

Groundwater

Groundwater was encountered at an elevation of about +1 feet, msl, during drilling of the borings. Fluctuations in the groundwater level may occur due to variations in rainfall, evaporation, construction activity and tidal fluctuations.

Laboratory Testing

Selected samples recovered from the borings were tested in the laboratory for moisture content,

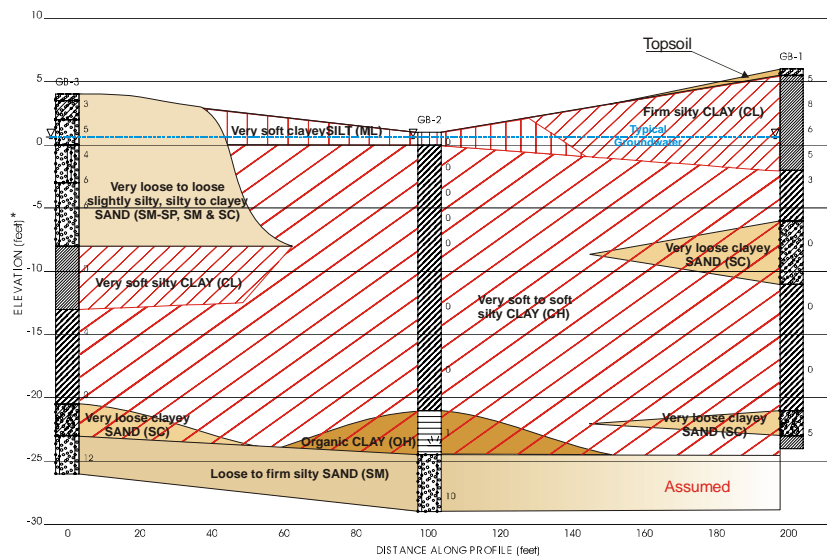


Figure 4. Estimated Subsurface Conditions

plasticity and grain size. These tests were used as aids in classifying the soil and for empirical evaluation of soil physical properties. The results of all laboratory testing conducted are included in Section 4 of this report.

Discussion of Subsurface Conditions and Foundations

The site and subsurface conditions described in the previous sections have been evaluated with regard to supporting the proposed bridge. The proposed structure is anticipated to be similar to typical timber pedestrian bridges, piers, boat docks and the like. These structures are lightly loaded and are normally best supported by treated timber pile foundations in a marine environment. The sands of Stratum 2 are the only bearing layer encountered by the borings for supporting low capacity piles. Some variation in bearing capacity will occur as a result of the variation in the soils above Stratum 2, especially in the marsh as compared to the abutment locations.

Recommendations

The following recommendations are provided based on subsurface data obtained from the site and engineering analysis of subsurface conditions and project information furnished to us.

Pile Foundations

- ☐ Pile foundations bearing in the Stratum 2 sands should be used to support the proposed timber

structures. Estimated lengths and ultimate capacities for driven timber piles are provided in Table 1. A typical safety factor for design is 2.0, but this type of structure it may be reasonable to select a lower safety factor for ease and economics of design.

Table 1. Estimated Ultimate Capacities of Driven Timber Piles

Boring Location	Tip Elev. (feet) msl	Compressive Capacity (tons)	Uplift Capacity (tons)	Lateral Capacity (tons)
GB-1	-30	30	24	1.0
GB-2	-30	18	12	0.0
GB-3	-30	24	18	2.0

- ❑ Timber piles should have a nominal tip diameter of 8 inches and conform to the requirements of ASTM D 25. They should be CCA or creosote treated in accordance with AWPA Standard C3 above and below the splash zone.
- ❑ Little lateral capacity should be assigned to plumb piles located in conditions similar to Boring GB-2 in the marsh area. Lateral pile capacity is proportional to the square of the pile diameter and square root of the permissible deflection. Lateral capacities provided assume an 8-inch diameter tip with ½ inch of deflection at the top of the pile at the abutments.
- ❑ Piles should be spaced at least 3 pile diameters center-to-center. A group efficiency of 100% has been incorporated into the individual pile capacities provided.
- ❑ Piles should be installed by conventional impact driving methods. Jetting or vibratory installation methods should not be permitted as they tend cause more soil disturbance and provide less field quality control. Preliminary installation criteria is as follows:

Pile Embedment: -30 feet, msl, with notable driving resistance.

Blow Count: driving resistance to the specified embedment to produce the required safe bearing capacity as determined by acceptable dynamic equations (to be determined after selection of the actual pile length and hammer).

- ❑ Compatibility of the pile type and installation equipment is essential to produce a foundation

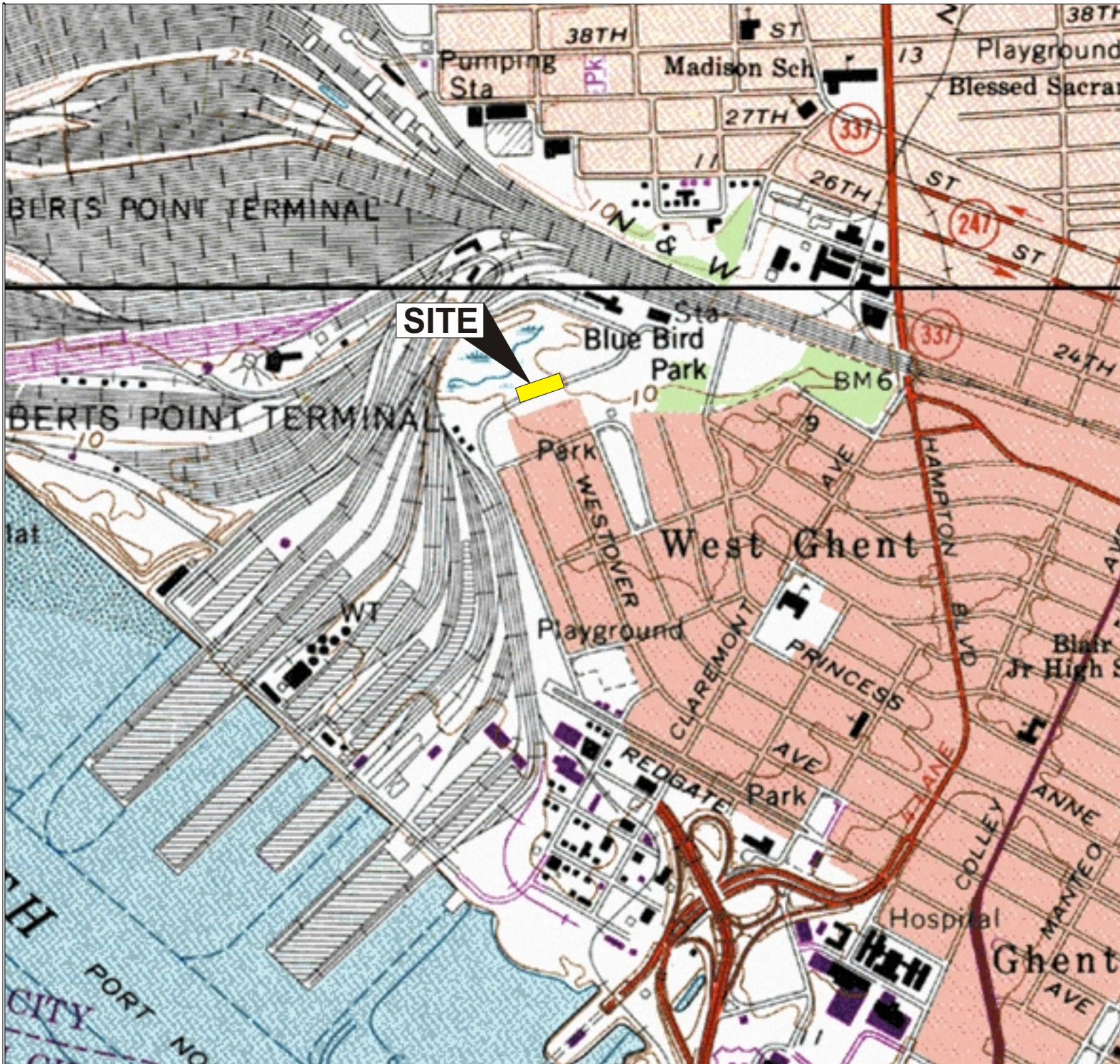
that performs satisfactorily. Prior to installing piles, the piling contractor should submit data sheets on the proposed driving equipment, installation procedures and piles to the Engineer for evaluation and to establish installation acceptance criteria.

- ❑ The energy of the driving hammer should be sufficient enough to install piles into the Stratum 2 sands without causing damage. Hammer energies in the range of 8,000 to 15,000 foot pounds per blow should be suitable.
- ❑ To the extent possible, pile installation should be a continuous operation without termination of driving until the point of acceptable resistance or embedment is achieved. If driving is temporarily halted, the pile should be redriven to the required depth or a combination of penetration and resistance that is determined to be acceptable by the Engineer.
- ❑ If the soil conditions encountered during construction are different from those described in this report, the geotechnical engineer should be contacted and consulted for guidance if necessary.

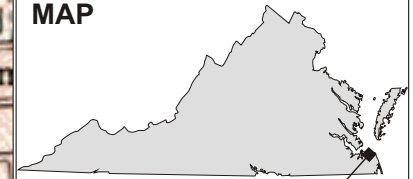
Basis For Recommendations

The recommendations provided are based in part on project information provided to us. They only apply to the specific project and site discussed in this report. If the project information section in this report contains incorrect information or if additional information is available, you should convey the correct or additional information to us and retain us to review our recommendations.

Regardless of the thoroughness of a geotechnical exploration, there is always a possibility that conditions between borings will be different from those at specific boring locations and that conditions will not be as anticipated by the designers or contractors. In addition, the construction process may itself alter soil conditions. Unanticipated conditions should be reported to the design team along with timely recommendations to solve the problems created.



VICINITY MAP

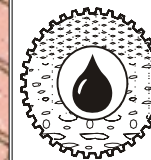


PROJECT
LOCATION

SOURCE:

Norfolk South, Virginia

USGS 7.5 Minute Topographic
Quadrangle Map
Photorevised 1986
(not to scale)



Environmental
Groundwater
Hazardous Materials
Geotechnical
Industrial

GER

CONSULTING ENGINEERS

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Virginia Beach, VA 23452

SITE LOCATION PLAN

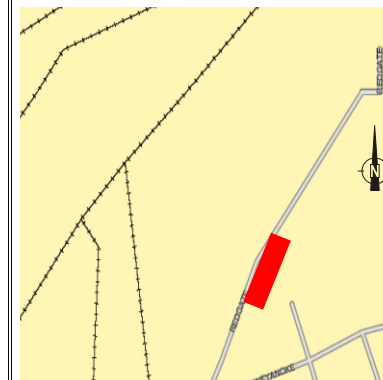
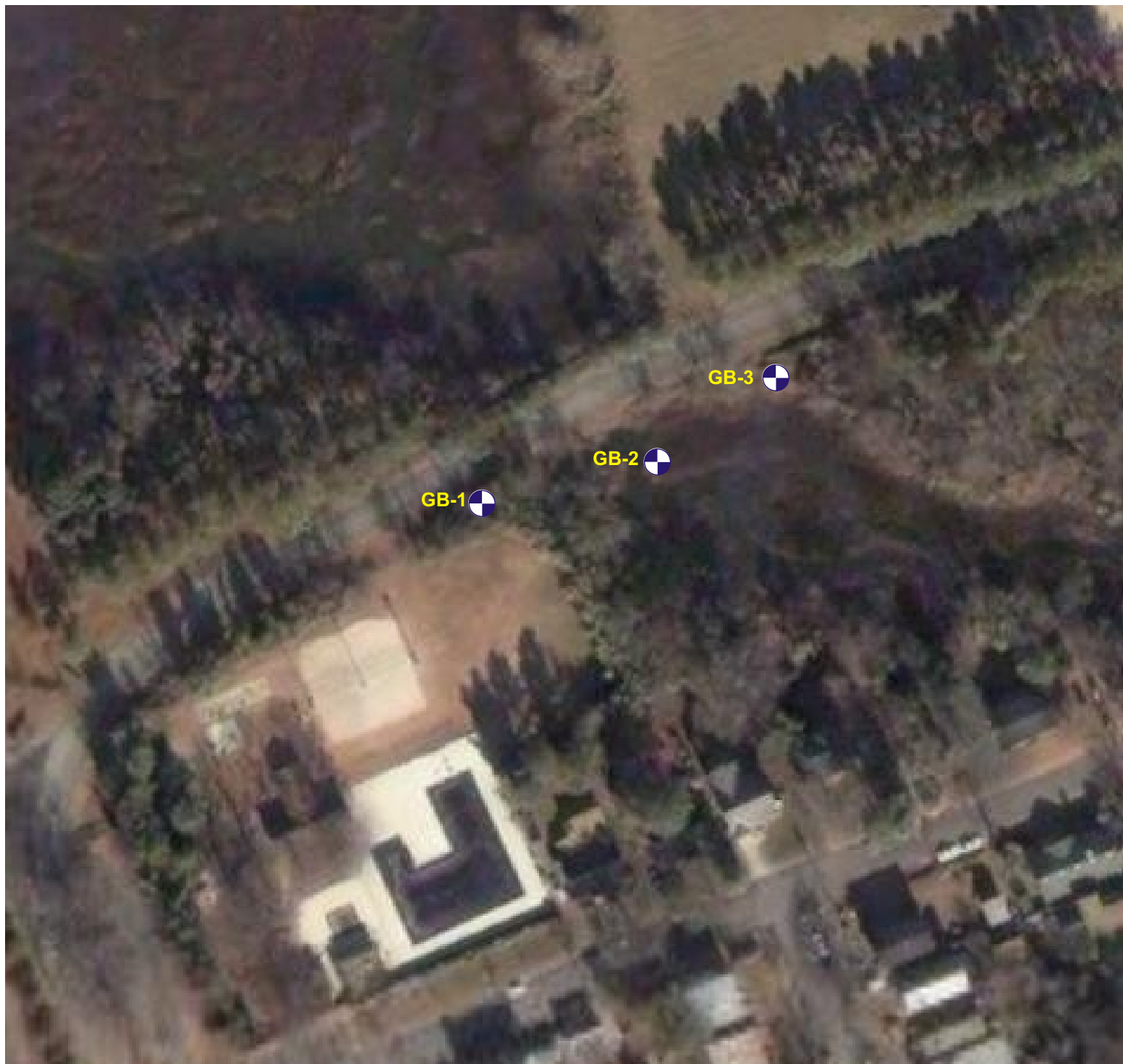
Elizabeth River Trail Bridge
Norfolk, Virginia

PROJECT NUMBER

110-4144

DRAWING NUMBER

1



NOT TO SCALE

NOTES:

The boring locations were not surveyed and may be several feet from the locations indicated on this drawing. Boring locations shall be considered approximate.

Aerial Photo courtesy of Google Earth



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Virginia Beach, VA 23452

BORING LOCATION PLAN

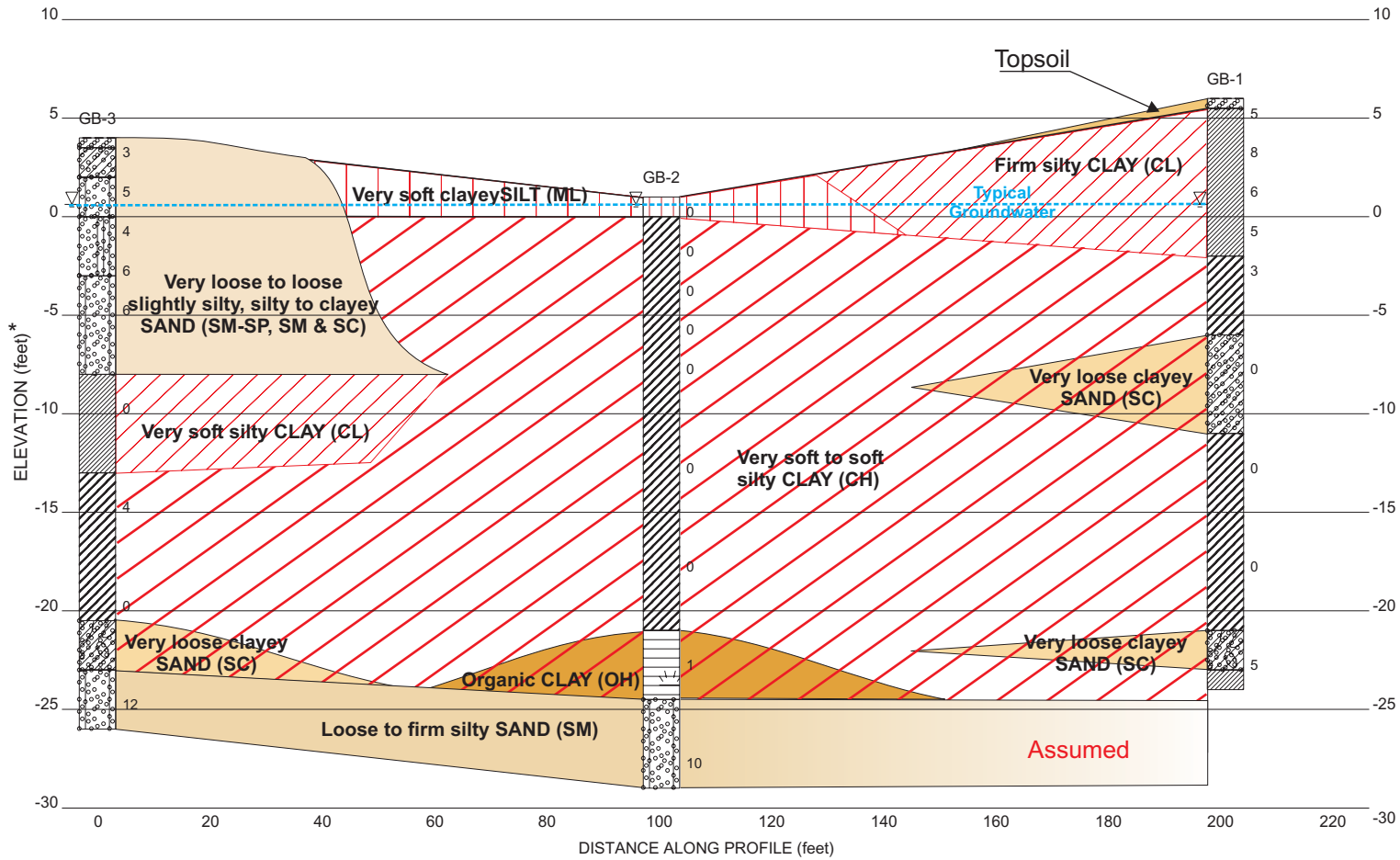
Elizabeth River Trail Bridge
Norfolk, Virginia

PROJECT NUMBER

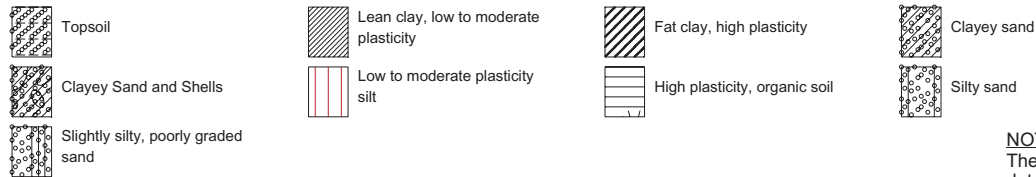
110-4144

DRAWING NUMBER

2



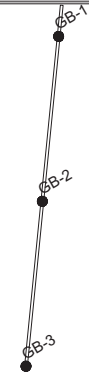
Lithology Graphics



NOTES:

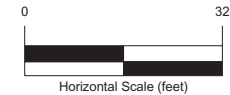
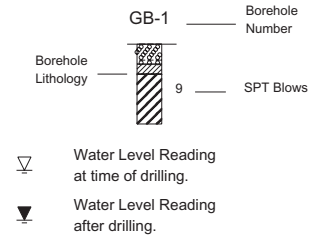
The subsurface conditions presented are based on the data collected at specific boring locations only. Actual subsurface conditions will likely vary from those indicated.

*Elevations estimated from USGS Topographic Map. Elevations and strata depths shall be considered approximate.



Site Map Scale 1 inch equals 120 feet

Explanation



Vertical Exaggeration: 3.5x



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SUBSURFACE PROFILE

Elizabeth River Trail Bridge
Norfolk, Virginia

110-4144












3

TEST BORING RECORDS

The enclosed test boring records represent our interpretation of the subsurface conditions encountered at the specific boring locations based on visual examination of the field samples obtained and selected laboratory classification testing if performed. The lines designating the interface between various strata on the boring records represent the approximate interface location. In addition, the transition between strata may be more gradual than indicated. Water levels shown represent the conditions only at the time of the field exploration. It is possible that soil and groundwater conditions between the individual boring locations will be different from those indicated. Boring elevations shown are approximate and are referenced to NAVD-88 unless noted otherwise.

BORING LOG LEGEND

KEY TO DRILLING SYMBOLS

	Split Spoon Sample (ASTM D 1586)		Water Table at Time of Drilling	H.S.A.	Hollow Stem Auger Drilling
	Undisturbed Sample (ASTM D 1587)		Water Table after 24 hrs.	M.R.	Mud Rotary Wash Drilling
	Rock Coring (ASTM D 2113)		Boring Cave In	W.O.H.	Weight of Hammer
	Roller Cone Advanced		Loss of Drilling Fluid	REC	Core Recovery (%)
			Auger Refusal	RQD	Rock Quality Designator (%)
			Roller Cone Refusal	SCR	Solid Core Recovery (%)
————— Approximate Strata Change Depth Different Soil Types		----- Approximate Strata Change Depth Similar Soil Types			
				Seepage into Borehole	

CORRELATION OF RELATIVE DENSITY AND CONSISTENCY WITH STANDARD PENETRATION TEST RESISTANCE (ASTM D 1586)[§] SPT RESISTANCE (N) IN BLOWS PER FOOT

SPT N	RELATIVE DENSITY [†] SAND & GRAVEL	SPT N	CONSISTENCY [†] SILT & CLAY
0 - 4	Very Loose	0 - 2	Very Soft
5 - 10	Loose	3 - 4	Soft
11 - 30	Firm	5 - 8	Firm
31 - 50	Dense	9 - 15	Stiff
51 +	Very Dense	16 - 30	Very Stiff
		31 - 50	Hard
		51 +	Very Hard

ROCK QUALITY[‡]

RQD (%)	DIAGNOSTIC DESCRIPTION	ROCK PARAMETER FIELD/LAB RATIO
0 - 25	Very Poor	0.15
25 - 50	Poor	0.20
50 - 75	Fair	0.25
75 - 90	Good	0.30 to 0.70
90 - 100	Excellent	0.70 to 1.00

HARDNESS

Very Hard - Breaking specimens requires several hard hammer blows

Hard - Hard hammer blow required to detach specimens

Moderately Hard - Light hammer blow required to detach specimens

Medium - May be scratched 1/16" deep by a knife or nail, breaks into several pieces by light hammer blow

Soft - Can be gouged readily by knife or nail, corners and edges broken by finger pressure

Very Soft - May be carved with a knife and readily broken by finger pressure

WEATHERING

Fresh - Fresh rock, bright crystals, no staining

Slight - Minimum staining and discoloration, open joints contain clay

Moderate - Significant portions of rock shows staining and discoloration, strong rock fragments

Severe - All rock shows staining, rock fabric evident but reduced strength

Very Severe - All rock shows staining, rock mass effectively reduced to soil with strong rock fragments remaining

Complete - Rock reduced to soil with rock fabric not discernable

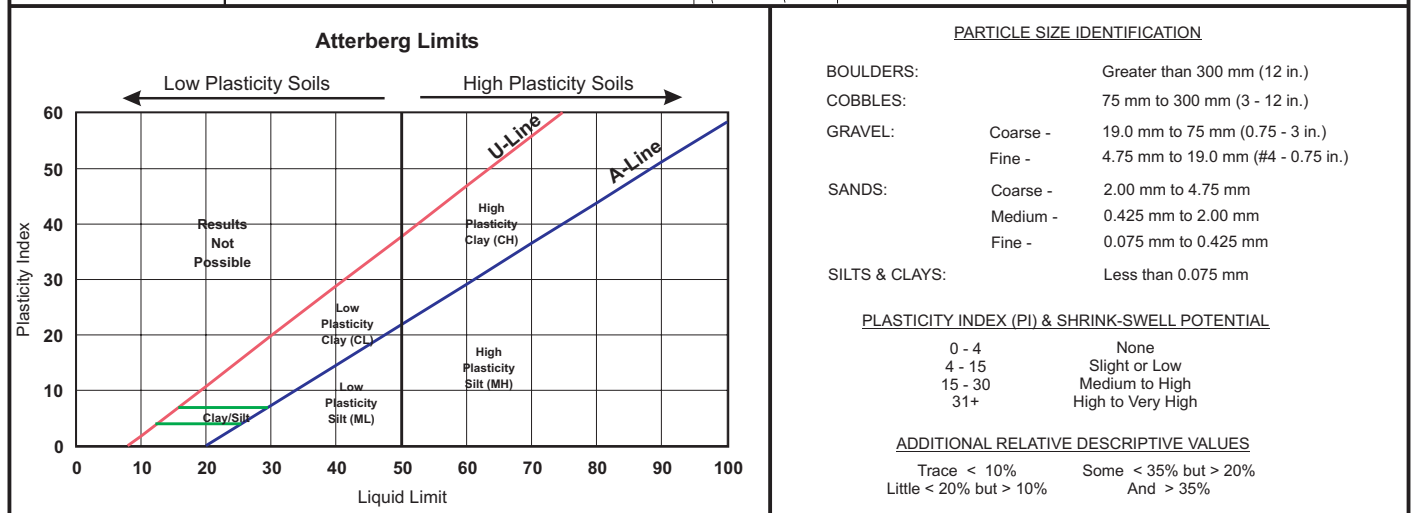
[§] Resistance of a standard 2-inch O.D., 1.375-inch I.D. split spoon sampler driven by a 140 pound hammer free-falling 30 inches.

[†] after Terzaghi and Peck, 1968

[‡] after D. J. Deere, 1963, 1967

SOIL CLASSIFICATION CHART (ASTM D 2487)

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LOW PLASTICITY LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, CLAYEY SILTS, SILT-VERY FINE SAND MIXTURES, ROCK FLOUR
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY, SANDY, SILTY, & LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC CLAYS OF LOW PLASTICITY
		HIGH PLASTICITY LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS AND MICACEOUS, DIATOMACEOUS AND ELASTIC SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
OTHER SOILS	HIGHLY ORGANIC SOILS		PT	PEAT, HUMUS, MUCK, SWAMP SOILS WITH VERY HIGH ORGANIC CONTENTS	
	UNCONTROLLED FILLS			DISTURBED SOILS WITH POSSIBLE DEBRIS AND RUBBLE, OLD CONSTRUCTION WASTES, NON-ENGINEERED BACKFILLS	
	DECOMPOSED OR PARTIALLY WEATHERED ROCK			TRANSITIONAL MATERIAL BETWEEN SOIL AND ROCK WHICH MAY RETAIN THE RELICT STRUCTURE OF THE PARENT ROCK	



TEST BORING RECORD

GeoEnvironmental Resources, Inc.

Environmental, Groundwater, Hazardous Materials,
Geotechnical & Industrial Engineering Consultants

Boring No. **GB-1**

Project: **Elizabeth River Trail Pedestrian Bridge**

GER Project Number: **110-4144**

Sheet No. **1 of 1**

Location: **Norfolk Virginia**

Driller: **Fishburne**

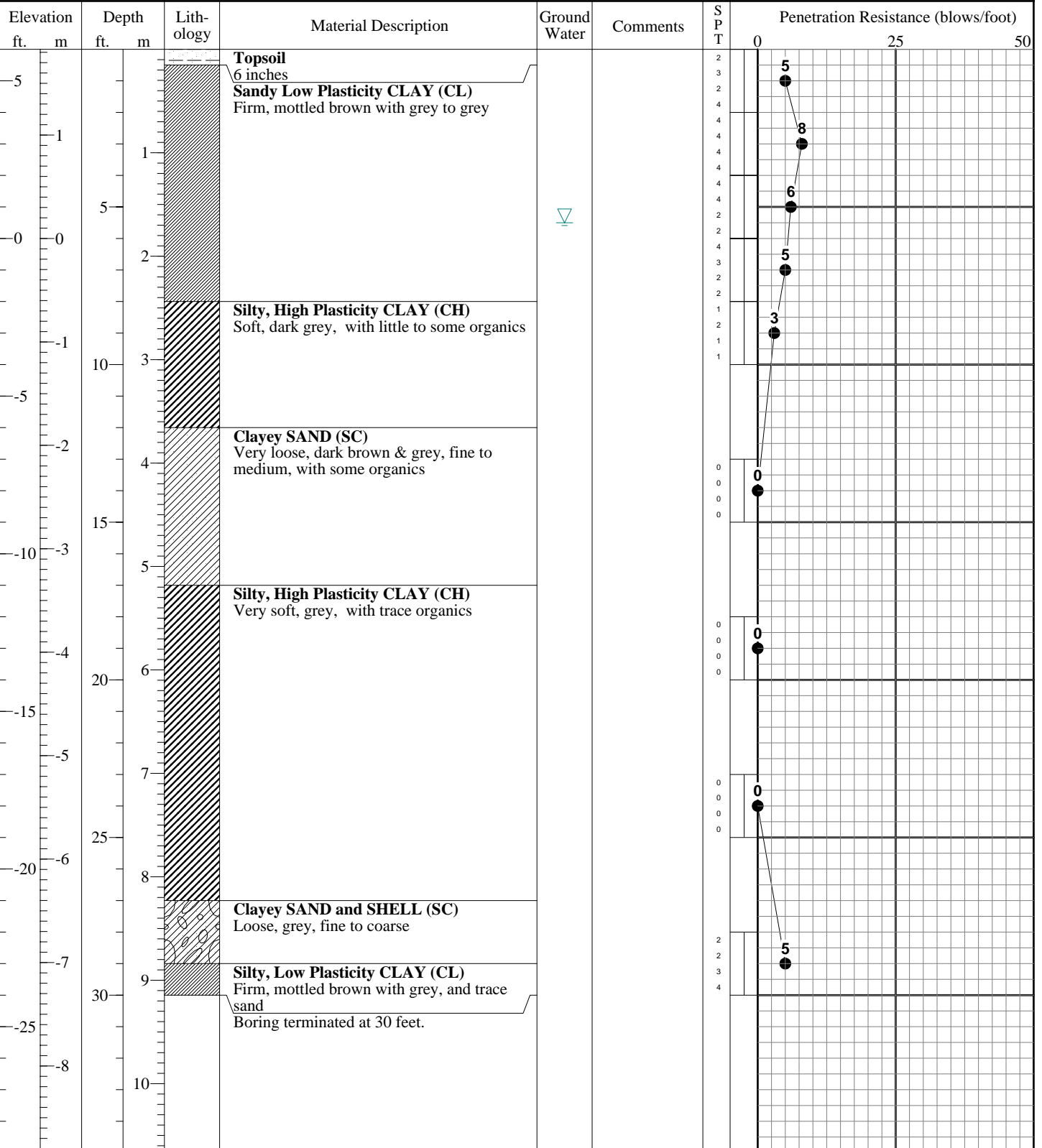
Date Drilled: **3/9/2006**

Depth (ft.): **30.0**

Elevation (ft.): **6.0**

Client: **Liberty Engineering**

Drill Method: **3" Mud Rotary**



TEST BORING RECORD WITH SPT & GRAPH 4144.GPJ GEOENV RESOURCES.GDT 4/25/06

TEST BORING RECORD

GeoEnvironmental Resources, Inc.				Environmental, Groundwater, Hazardous Materials, Geotechnical & Industrial Engineering Consultants				Boring No. GB-2	
Project: Elizabeth River Trail Pedestrian Bridge				GER Project Number: 110-4144				Sheet No. 1 of 1	
Location: Norfolk Virginia				Driller: Fishburne				Date Drilled: 3/9/2006	
Depth (ft.): 30.0		Elevation (ft.): 1.0		Client: Liberty Engineering				Drill Method: 3" Mud Rotary	

Elevation	Depth	Lithology	Material Description	Ground Water	Comments	SPT	Penetration Resistance (blows/foot)
ft. m	ft. m						
-0	0		Clayey, Low Plasticity SILT (ML) Very soft, black, with some roots and organics	▽			0
			Silty, High Plasticity CLAY (CH) Very soft, grey, with little organics				0
-1	1						0
-5	5						0
-2	2						0
-10	10						0
-4	4						0
-15	15						0
-5	5						0
-20	20						0
-7	7		Organic CLAY (OH) Very soft, dark brown, with little wood fragments				1
-25	25		Silty SAND (SM) Loose, brown, fine to medium				10
-30	30		Boring terminated at 30 feet.				
-10	10						

TEST BORING RECORD WITH SPT & GRAPH 4144.GPJ GEOENV RESOURCES.GDT 4/25/06

TEST BORING RECORD

GeoEnvironmental Resources, Inc.

Environmental, Groundwater, Hazardous Materials,
Geotechnical & Industrial Engineering Consultants

Boring No. **GB-3**

Project: **Elizabeth River Trail Pedestrian Bridge**

GER Project Number: **110-4144**

Sheet No. **1 of 1**

Location: **Norfolk Virginia**

Driller: **Fishburne**

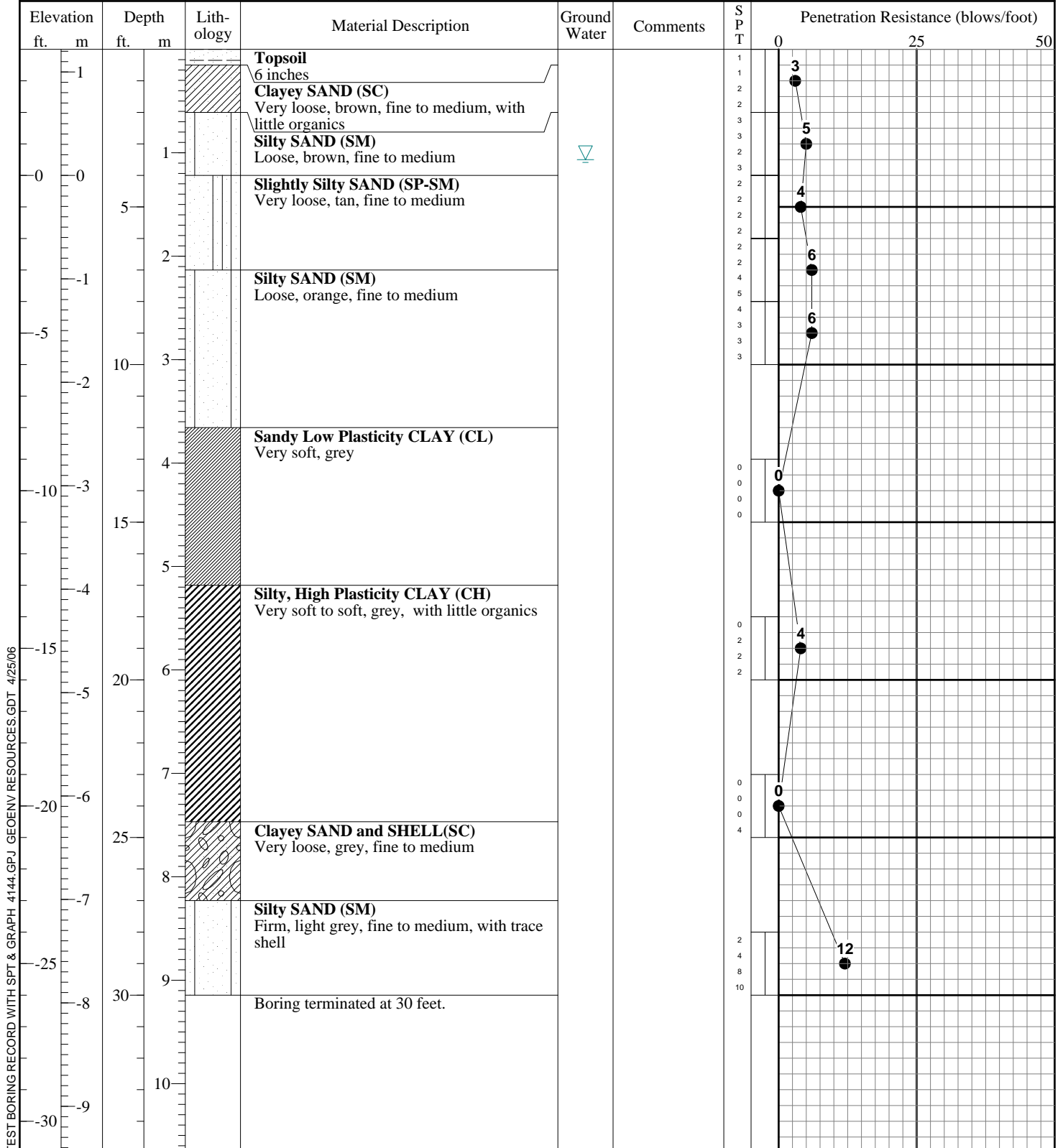
Date Drilled: **3/9/2006**

Depth (ft.): **30.0**

Elevation (ft.): **4.0**

Client: **Liberty Engineering**

Drill Method: **3" Mud Rotary**



TEST BORING RECORD WITH SPT & GRAPH 4144.GPJ GEOENV RESOURCES.GDT 4/25/06

LABORATORY TESTING

The enclosed laboratory test records represent the subsurface soil properties encountered at the specific boring locations based on the laboratory classification testing performed. It is possible that soil properties and conditions between the individual boring locations and depths will be different from those indicated.

LABORATORY DATA SUMMARY

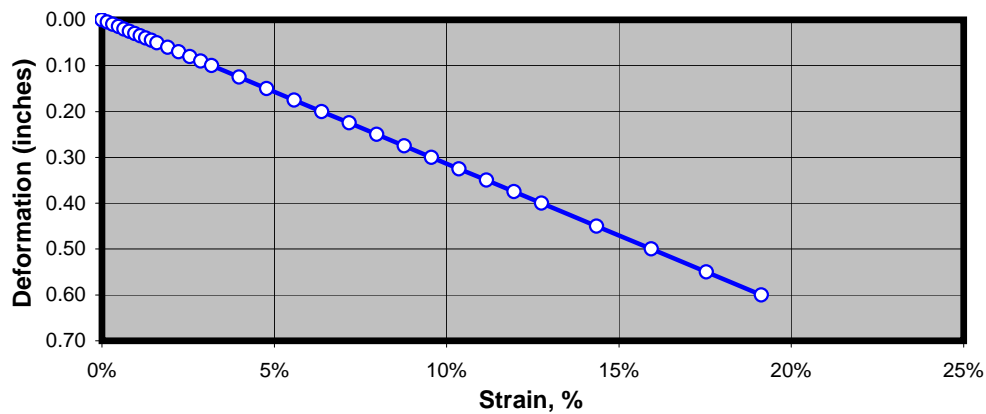
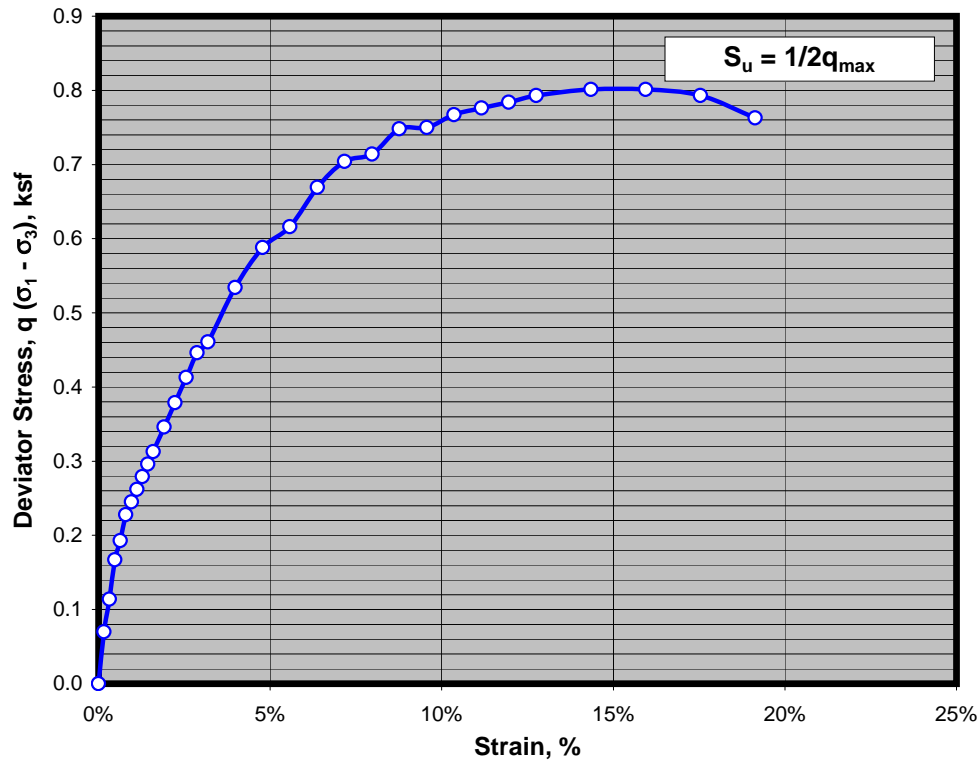
Project: Elizabeth River Trail Pedestrian Bridge
GER Project Number: 110-4144


Number: 3884-110
Date: 3/14/06

SAMPLE NUMBER	DEPTH (FEET)	SAMPLE TYPE	CLASS.	MOISTURE CONTENT (%)	LL	PL	PI	OTHER TESTS
GB-1	23 to 25	SS	CH	49.2	57	21	36	UNCONFINED COMPRESSION
GB-2	8 to 10	SS	CH	114.9	-	-	-	-
GB-2	13 to 15	SS	CH	119.8	124	42	82	-
GB-2	18 to 20	SS	CH	124.7	128	43	85	-
GB-3	13 to 15	SS	CL	38.3	-	-	-	-

Tests performed in accordance with applicable ASTM Standards.

etc.



Boring	GB-1				Unconfined Compression Tests ASTM D 2166
Sample Depth	24 feet				
Classification Symbol	CH				
Initial Water Content (%)	49.2				Project: Elizabeth River Trail Pedestrian Bridge Location: Norfolk, VA Number: 110-4144 Date: 4/26/2006
Liquid Limit	57				
Plasticity Index	21				
Initial Void Ratio	1.324				 CONSULTING ENGINEERS GeoEnvironmental Resources, Inc. Environmental • Groundwater • Hazardous Materials • Geotechnical
Specific Gravity (est.)	2.67				
Initial Saturation (%)	99.24				
Wet Density (pcf)	106.97				
Dry Density (pcf)	71.7				
Test Type	UC				
Confining Pressure (ksf)	N/A				
Effective Friction Angle ϕ' (empirical)	N/A				
Undrained Shear Strength, S_u (ksf)	0.40				
Normally Consolidated S_u/P	0.19				
Overconsolidated S_u/P	N/A				
Estimated $P'c$, ksf (empirical)	N/A	N/A	N/A	N/A	



GEOTECHNICAL EXPLORATION PROCEDURES

The general field investigation procedures employed by GeoEnvironmental Resources, Inc. for geotechnical engineering studies are included in ASTM D 420-93, entitled *Standard Guide to Site Characterization for Engineering, Design and Construction Purposes*. This recommended practice lists various recognized methods and ASTM standards by which soil, rock and groundwater conditions may be determined. These methods include geophysical and in-situ testing as well as boring and sampling methods. Note that more than one investigative method may be applicable for a particular project and the type and extent of the methods used will vary between different projects and consulting engineering firms.

Boring, Sampling & Standard Penetration Testing

Soil test borings with incremental soil sampling is the most widely used method of subsurface exploration in the local industry today. On our projects, advancement of borings to obtain subsurface samples is typically performed using one of the following techniques depending on the anticipated subsurface conditions, desired depth and information required.

Method	Reference	Use
Open hole rotary drilling with mud slurry	ASTM D 5783	Through soil in any geologic region, normally used locally for boring depths of 20 feet or more
Continuous flight hollow stem auger drilling	ASTM D 5784	Typically used for shallow Coastal Plain soil borings or in Piedmont geology; ideal for installing monitoring wells
Diamond core drilling	ASTM D 2113	For penetrating rock, concrete and dense cemented soils
Hand auger boring	ASTM D 4700	For shallow soils above the groundwater table
Excavation	ASTM D 4700	For soil and aggregates above the groundwater table

Penetration or in-situ tests normally accompany boring and sampling operations on geotechnical explorations since borings alone usually do not provide adequate information concerning the type, strength and compressibility properties of the subsurface soils. The standard penetration test (SPT) has become the most widely used procedure in the industry to obtain subsurface data and samples. Although it is a relatively crude test, it can provide a general indication of soil strength and compressibility while simultaneously sampling the soil.

Standard penetration testing and split barrel sampling are conducted at regular intervals in a borehole in accordance with ASTM D 1586. Standard practice on most GER projects is to perform this testing and sampling continuously within the upper 10 feet of the subsurface, and then at maximum 5-foot center-to-center intervals thereafter. At the desired test depth, the drilling tools are removed and a split barrel sampler is connected to the drilling rods and lowered back into the borehole. The sampler is first seated six inches into the bottom of the hole to penetrate any loose cuttings from the drilling operations. It is then driven an additional 12 inches by the impact of a 140 pound hammer free-falling 30 inches. The number of hammer blows required to drive the sampler for each 6-inch interval is recorded. The combined number of blows required to drive the sampler the final 12 inches is designated *standard penetration resistance* or *N-value*. Representative portions of soil from each split barrel sample are placed in air tight glass jars or plastic bags and transported to a laboratory.



Undisturbed Sampling

Split barrel samples are used for visual examination and simple laboratory classification tests; however, they are disturbed and not sufficiently intact for quantitative laboratory testing such as strength or consolidation. When such laboratory testing is desired, relatively undisturbed samples are obtained by slowly pushing a 3-inch diameter, thin-walled (16 gauge) galvanized steel tube into the soil at desired sampling depths. This is followed by carefully removing the soil-filled tube from the borehole and sealing the ends to prevent moisture loss. The procedure is described in ASTM D 1587. Undisturbed tube samples are most frequently used for sampling cohesive soils (clay and silt), but may be used to sample fine grained cohesionless soils with the aid of a piston sampling head.

Excavation

When explorations do not require machine-drilled borings, excavations, test pits, hand auger borings and other means described in ASTM D 4700 may be used to observe shallow subsurface conditions and to collect soil samples. The maximum depth of these methods is generally limited by the depth of groundwater. These methods are useful in obtaining bulk samples for laboratory classification, compaction and other remolded tests.

Rock Coring

Core drilling methods described in ASTM D 2113 are used to advance boreholes into rock or extremely dense soils which are not penetrable by conventional boring methods and typically exhibit more than 100 blows per foot by ASTM D 1586. Core drilling methods employed by **GER** use double tube swivel-type designed equipment with a drilling fluid, in which an outer tube rotates and performs the cutting while the inner tube remains stationary and collects a continuous sample of rock.

In-Situ Methods

In-situ tests are sometimes used on projects to obtain additional subsurface data. These methods provide direct and empirical measurement of various soil properties without collection of actual samples. Because samples are not collected, it is not common practice in the U. S. to utilize in-situ tests alone to accomplish geotechnical investigations. On projects where in-situ testing is used, it is customary to perform them in conjunction with borings. A list of several in-situ tests that are sometimes used in this locality is shown below.

Method	Reference	Use
Static Cone Penetrometer	ASTM D 3441	Semiempirical estimate of soil shear strength, empirical estimate of elastic and lateral soil properties, continuous profile, limited in dense soil and rock
Flat Blade Dilatometer	Marchetti	Semiempirical estimate of lateral and elastic soil properties, continuous profile, limited in dense soil and rock
Pressuremeter	ASTM D 4719	Semiempirical estimate of lateral and elastic soil properties, used inside a borehole
Electrical Resistivity	ASTM G 57	Geophysical method for estimating corrosion potential, profiling anomalies and dense soil and rock

Data Logging & Quality Control

A geotechnical engineer from our office supervises all drilling and sampling activities by the boring subcontractor and records the subsurface conditions encountered on field boring logs. These records contain pertinent information concerning the method of boring, samples



attempted and recovered, indications of anomalies, observations of groundwater and types of materials encountered such as sands, clays, silts, gravel, weathered rock, etc. Interpretation of the soil conditions is made between samples; therefore, the boring records contain both factual and interpretive information.

The geotechnical engineer visually observes each of the soil samples obtained and estimates their classification in general accordance with ASTM D 2487, *Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System)*. Where rock samples are obtained, samples are classified in accordance with ASCE *Manuals and Reports on Engineering Practice, No. SM6 (1972) & No. 56 (1976)*. Classifications are recorded on the field logs.

Final test boring records are constructed and submitted with reports. These records represent our interpretation of the subsurface conditions encountered based on engineering examination and laboratory tests of selected field samples. They depict subsurface conditions at specific boring locations and at the particular time of the field investigation. Soil conditions at other locations may differ from conditions at these boring locations. Also, the passage of time may result in a change in the subsurface soil and groundwater conditions at the boring locations. The lines designating interfaces between soil strata on the test boring records and on subsurface profiles represent approximate boundaries. The transition between soil materials is likely to be more gradual than indicated.

The general procedures most commonly practiced by **GER** for typical geotechnical exploration projects are summarized below:

Task	Description
1 Project Setup	Plan the exploration program, obtain necessary permits and property access rights, schedule start and completion dates for the work.
2 Testing Layout	Stakeout proposed testing and sampling locations based on scaled drawings furnished by the client and using reference landmarks at the site. Shift locations to avoid utilities and other site constraints.
3 Utility Clearance	Notify appropriate utility locating company of proposed testing and sampling locations so that existing utilities can be marked. State law normally requires notification at least 48 hours prior to starting work.
4 Field Investigation	Document pertinent site features, supervise testing procedures and collection of samples, visually classify and containerize soil samples, record groundwater conditions, construct logs of field data.
5 Laboratory Program	Assign laboratory tests on selected soil samples recovered from the site, tabulate and evaluate the results.
6 Engineering Evaluation	Develop a subsurface profile using available field and laboratory data, perform engineering analysis of subsurface conditions encountered, develop appropriate design and construction recommendations for the project.

Quality control is maintained at all levels throughout a project by carefully reviewing recommendations, reports and test procedures and results. Discussions that summarize laboratory tests conducted on samples recovered from projects sites are noted on the subsequent pages.



Soil Classification

Soil classification tests provide a general guide to the engineering properties of various soil types. Samples obtained during drilling operations are examined and visually classified by an engineer or geologist according to consistency, color and texture. These classification descriptions are included on the boring records. The classification system is primarily qualitative and for detailed soil classification, two laboratory tests are necessary; grain size tests and plasticity tests. Using these test results, the soil can be classified according to the AASHTO or Unified Classification System (ASTM D 2487). Each of these classification systems and the in-place physical soil properties provides an index for estimating the soil's behavior. The soil classification and physical properties obtained are presented on the following sheets.

Grain Size Tests

Grain size tests are performed to determine the soil classification and the grain size distribution. The soil samples are prepared for testing according to ASTM D 421 (dry preparation) or ASTM D 2217 (wet preparation). The grain size distribution of soils coarser than the #200 U.S. Standard Sieve (0.074 mm opening) is determined by passing the samples through a standard set of nested sieves. Materials passing the No. 200 sieve are suspended in water and the grain size distribution calculated from the measured settlement rate. These tests are conducted in accordance with ASTM D 422.

Plasticity Tests

Plasticity tests are performed to determine the soil classification and plasticity characteristics. The soil plasticity characteristics are defined by the Plastic Index (PI) and the Liquid Limit (LL). The PI is related to the volume changes which occur in confined soils beneath foundations. The PI and LL are determined in accordance with ASTM D 4318.

Physical Properties

The in-place physical properties are described by the specific gravity, wet unit weight, moisture content, dry unit weight, void ratio and percent saturation of the soil. The specific gravity and moisture content are determined by ASTM D 854 and D 2216, respectively. The wet unit weight is found by obtaining a known volume of soil and dividing the wet sample weight by the known volume. The dry unit weight, void ratio and percent saturation are calculated values.

California Bearing Ratio

The California Bearing Ratio (CBR) test is a comparative measure of the shearing resistance of a soil. It is used with empirical curves to design asphalt pavement structures. The test is performed in accordance with ASTM D 1883 or Virginia Test Method Designation VTM-8. A representative bulk sample is compacted in a six-inch diameter CBR mold in five (5) equal layers, using 45 evenly spaced blows per layer with a 5.5 lb. hammer falling 12 inches. CBR tests may be run on the compacted samples in either soaked or unsoaked conditions, with samples penetrated at the rate of .05 inches per minute to a depth of 0.5 inches. The CBR value is the percentage of the load it takes to penetrate the soil to a specified depth compared to the load it takes to penetrate a standard crushed stone to the same depth.

Consolidation Tests

Consolidation tests determine the change in height of a soil sample with increasing load. The results of these tests are used to estimate the settlement and time rate of settlement of structures constructed on similar soils. The test is run in accordance with ASTM D 2435 on a single element of an extruded undisturbed sample. The test sample is trimmed into a disk



approximately 2½ inches in diameter and one inch thick. The disk is confined in a stainless steel ring and sandwiched between porous plates and subjected to incrementally increasing vertical loads, with the resulting deformations measured with micrometer dial gauges. Void ratios and percent strain deformation are then calculated from these readings. The test results are presented in the form of a stress-strain or vertical pressure versus void ratio curve.